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# Multigrade Teaching in Primary Schools in Nepal: Practice and Training

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# Abstract

One of the most significant unsolved issues in achieving Education for All is increasing the quality of education, especially among the most disadvantaged groups. In remote areas, where many of these groups live, primary schools are often organised as multigrade schools. In these schools, teachers are simultaneously responsible for two or more grades during one lesson period. However, multigrade teaching is often overlooked by both policy makers and researchers. Multigrade teachers are unsupported because monograde teaching predominates. There is a very limited corpus of research on multigrade schools or multigrade teaching.

This study aims to draw the attention of both policy makers and researchers to multigrade teaching in the context of Nepal. The research is framed by five research questions: (1) What are the contemporary and historical system characteristics of multigrade teaching? (2) What are the characteristics of multigrade primary schools? (3) What are the practices of multigrade teaching? (4) What kind of models of innovation and change best explain current teacher training? (5) Does current training address the problems of multigrade classrooms and improve knowledge, competence and performance of teachers? The study relies on needs-based (i. e. context and input), process and output evaluations of multigrade teacher training, conducted during twenty months of fieldwork. The main sources of evidence were observations, interviews, questionnaires, documentary analysis and focus group discussions.

It can be assumed that multigrade schools are prevalent in Nepal. Although no clearly stated policies on multigrade teaching have been established, special in-service training for multigrade teaching is conducted. The practice of multigrade teaching in classrooms is diverse. Detailed observation identifies five different patterns of multigrade class organisation. This typology serves as a tool for both policy makers and researchers for understanding effective practice in the classroom. The evaluations trace the process of teacher training from the central to resource centre level, and eventually to the classrooms. Current training is inspired by diffusion-oriented models of innovation and change. While trainees gain knowledge and competence in 'practice teaching' during the training course, its final impact of the course on teacher performance in the classrooms remains modest. Problems in the training process are identified and recommendations for future improvements formulated.

Table of Contents

Abstract....2
Table of Contents....3
List of Tables....10
List of Figures....14
List of Abbreviations....15
Acknowledgements....16
Preface....18

Chapter One: Introduction....21

1.1 Rationale for the study....21
1.2 Previous research....23
1.3 Approach to the study....24
1.4 Research questions....25
1.5 Organization of the study....27

Chapter Two: Policies, Strategies and Practices of Multigrade Teaching: A Review of Experience in Developing Countries....29

2.1 Literature on policies on multigrade teaching....29
2.1.1 Policy diversity....29
2.1.2 Countries with policies directly related to multigrade teaching....30
2.1.3 Countries without policies directly related to multigrade teaching....31

2.2 Literature on strategies for multigrade teaching....32
2.2.1 Combined strategies....33
2.2.2 Single strategies....34
2.2.3 Two perspectives on multigrade teaching....36
2.2.4 Countries without strategies specially targeted multigrade teaching....38

2.3 Literature on context of multigrade schools....39
2.3.1 The location of multigrade schools....39
2.3.2 Disadvantaged communities....40
2.3.3 Physical conditions of multigrade schools....41
2.3.4 General characteristics of teachers in multigrade schools....41
2.3.5 General reputation of multigrade teaching....42

2.4 Literature on practice in multigrade classrooms....43
2.4.1 Combination of grades....43
2.4.2 One-room and separate rooms....43
2.4.3 Classroom environment....44
2.4.4 Class organisation....44
2.4.5 Direct teaching in one class and assigned tasks for another class....45
2.4.6 Managing all grades simultaneously with frequent short visits....47

2.4.7 Teaching activities....47

2.5 Literature on problems relating to the classroom practices of multigrade teaching....49
2.5.1 Negative perceptions of multigrade teaching....49
2.5.2 Teacher-related constraints and teacher training....51
2.5.3 Teaching and learning materials....52
2.5.4 Isolation and supervision....53

2.6 Conclusion....53
2.6.1 Policies and strategies: the international context....54
2.6.2 Schools and classrooms: the international context....55

Chapter Three: The Current Situation, and Strategies for Multigrade Teaching in Primary Schools in Nepal....58

3.1 Primary education in Nepal....58
3.1.1 A country profile....58
3.1.2 Education system....60
3.1.3 The place of primary education in education policies....62
3.1.4 Finance in primary education....63
3.1.5 National curriculum of primary education....64
3.1.6 Primary school teachers....65
3.1.7 School cluster systems....66

3.2 Multigrade teaching in primary schools....66
3.2.1 Frequency of multigrade teaching....66
3.2.2 Rapid expansion of primary schools and multigrade teaching....68
3.2.3 Low quality of education and multigrade teaching....70
3.2.4 Inequity in disadvantaged populations and multigrade teaching....71

3.3 History of multigrade teaching in Nepal....73
3.3.1 The inception of a modern graded education system: 1951-1975....74
3.3.2 Intention and implementation....76
3.3.3 Reality of multigrade schools....77
3.3.4 The emergence of two major projects in support of multigrade teaching in the 1980s....77
3.3.5 The Basic and Primary Education Project (BPEP) in the 1990s....80

3.4 Current strategies for multigrade teaching....84
3.4.1 Basic Primary Teacher Training....84
3.4.2 Multigrade Teaching Training....85

3.5 Conclusion....86

Chapter Four: Research Design and Methods....88

4.1 A theoretical account of the approach taken....88

4.2 Multigrade Teaching Project.....89

4.3 Evaluation study.....90
4.3.1 Needs-based evaluation.....91
4.3.2 Process evaluation.....92
4.3.3 Output evaluation.....93

4.4 Research Access.....94

4.5 The role of the researcher.....95

4.6 Research methods for data collection.....96
4.6.1 Observations.....98
4.6.2 Interviews.....100
4.6.3 Questionnaire.....102

4.7 Sample selections.....103
4.7.1 School visits.....104
4.7.2 Training evaluation.....105

4.8 An account of data analysis.....106
4.8.1 Practice of multigrade teaching.....106
4.8.2 Training policies for multigrade teaching.....107
4.8.3 Evaluation of the training.....107
4.8.4 Underlying causes of training results.....108

4.9 Ethical issues.....109

4.10 Limitations and challenges.....110
4.10.1 Being an outsider: weakness and strength.....110
4.10.2 Language issues: visual indicators, back-translation and field pre-test.....111

Chapter Five: Current Conditions of Multigrade Primary Schools in Nepal.....113

5.1 District profile.....113
5.1.1 Central department of the hill region.....113
5.1.2 Nuwakot district.....113
5.1.3 Kavre district.....115
5.1.4 Primary educational context in the two districts.....115
5.1.5 Multigrade teaching in the two districts.....116

5.2 Multigrade primary school characteristics.....119
5.2.1 Location and size of schools.....119
5.2.2 Physical facilities.....121
5.2.3 Community support.....122
5.2.4 Curriculum and teaching materials.....124

5.2.5 Supervision....125
5.2.6 School leadership....126
5.2.7 Teachers....128
5.2.8 Student attendance rates and academic achievement....130

5.3 Conclusion....132

Chapter Six: Current Practices in Multigrade Primary Classrooms in Nepal....135

6.1 Multigrade primary classrooms....135
6.1.1 Classroom environment....135
6.1.2 Combination of grades and timetables....135

6.2 Five patterns of multigrade class organisation....138
6.2.1 Pattern one: shifting from multigrade to monograde teaching in the whole school....139
6.2.2 Pattern two: dividing a lesson period equally into two time sections....142
6.2.3 Pattern three: teaching as a main teaching class and a self learning class....144
6.2.4 Pattern four: visiting each different classroom frequently during a lesson period....145
6.2.5 Pattern five: whole class teaching for extra curricular subjects....148
6.2.6 Revisiting the mini case studies....149
6.2.7 Questionnaire....150

6.3 Teaching activities in multigrade classrooms....151
6.3.1 Teaching activities....151
6.3.2 Use of teaching materials....152
6.3.3 Learning amount....152

6.4 Problems with multigrade class organisation....153
6.4.1 Diversity in teacher responsibilities for multigrade teaching....153
6.4.2 The ladder of multigrade teaching....155

6.5 Teacher perception of problems in relation to multigrade teaching....156
6.5.1 Negative perception of multigrade teaching....156
6.5.2 Problems which the teachers take into consideration....157

6.6 Teacher perception of the needs of multigrade teaching....160
6.6.1 Teacher training....160
6.6.2 Physical facilities and teaching materials....162
6.6.3 Supervision and others....162

6.7 Conclusion....162

Chapter Seven: The model of Multigrade Teaching Training with regard to innovation and change.....166

7.1 Models of innovation and change in educational practice.....166
7.1.1 Equilibrium and conflict paradigms.....167
7.1.2 Innovation-oriented models.....168
7.1.3 Diffusion-oriented models.....170
7.1.4 User-oriented models.....172
7.1.5 Power-oriented models.....174
7.1.6 The relevance of different models of innovation and change to teacher development in Nepal.....175

7.2 Analysis of the training package of Multigrade Teaching Training.....177
7.2.1 How the training package is developed.....177
7.2.2 The research conveyed for development.....177
7.2.3 The ideal model of multigrade teaching.....178
7.2.4 Key concepts for multigrade teaching.....178
7.2.5 Model lessons for class demonstration.....180
7.2.6 A model for Self Learning Activity (SLA).....180
7.2.7 Analysis of training material in relation to multigrade teaching.....180
7.2.8 Structure of the training material.....182
7.2.9 Style of the training material.....182
7.2.10 Quantitative volume of sections.....183
7.2.11 Analysis of training material in relation to local context.....184
7.2.12 Training handbook for the trainer.....185

7.3 Analysis of the cascade system of Multigrade Teaching Training.....185
7.3.1 Effectiveness of the cascade system.....185
7.3.2 How the messages are diffused in Nepal.....187
7.3.3 Trainers.....188
7.3.4 Diffusion of training courses.....189

7.4 Trainees of Multigrade Teaching Training.....190
7.4.1 Characteristics of the trainees.....190
7.4.2 How the trainee-teachers are involved.....192
7.4.3 The role of teachers in the implementation of the training programme.....192

7.5 Conclusion.....193

Chapter Eight: Input Evaluation of Multigrade Teaching Training.....195

8.1 The linkage in the cascade system.....195

8.2 Training plan for Master Training of Trainers (MTOT).....196

8.3 Structural gaps in the cascade system.....197

8.4 Knowledge transfer by the trainers.....198

8.5 Conclusion.....200

Chapter Nine: Process Evaluation of Multigrade Teacher Training.....203

9.1 The motivation and the expectation of the trainees to participate in the training

9.1.1 Motivation of the trainees.....203
9.1.2 Expectation of the trainees from the training.....204

9.2 Observation of the training.....205
9.2.1 Training conditions in Nuwakot district.....205
9.2.2 Training conditions in Kavre district.....206
9.2.3 Physical conditions for group work.....208
9.2.4 Implementations.....209
9.2.5 Instruction of the trainers.....210
9.2.6 Practice teaching.....211
9.2.7 Observation forms.....211
9.2.8 Attitude of the trainees.....212

9.3 Self-evaluation of the training programme by the trainees.....212
9.3.1 Detailed evaluation of the training.....213
9.3.2 Trainee perception of multigrade teaching after the training.....215

9.4 Follow up support by the trainers.....217

9.5 Conclusion.....217

Chapter Ten: Output Evaluation of Multigrade Teacher Training.....219

10.1Trainee knowledge concerning multigrade teaching before the training.....219
10.1.1 Nuwakot district.....219
10.1.2 Kavre district.....220

10.2Knowledge on multigrade teaching acquired by the trainees during the training.....221
10.2.1 The most 'impressive' components of the training.....222
10.2.2 Comprehension of multigrade teaching before and after the training.....223
10.2.3 Knowledge of multigrade teacher-trainees before and after the training.....226
10.2.4 Competence to apply and act on newly acquired knowledge.....238

10.3Performance of multigrade teaching in the classroom before and after the training.....230
10.3.1 Class observation of five multigrade teacher-trainees.....230
10.3.2 Trainee Kavre-12.....232
10.3.3 Trainee Kavre-4.....235
10.3.4 Trainees Nuwakot-B22 and Nuwakot-R2.....236
10.3.5 Trainee Nuwakot-B3.....237
10.3.6 Other changes in the classroom after the training.....240

10.4Trainer evaluation concerning the impact of the training course.....243

10.5Conclusion.....243

Chapter Eleven: Conclusion.....245

11.1 Learning from findings on multigrade teaching practice and training.....245
11.1.1 System characteristics of multigrade teaching in Nepal.....245
11.1.2 Practice of multigrade teaching.....247
11.1.3 Training for multigrade teaching.....250

11.2 The place of findings in the context of the international literature on multigrade teaching.....257
11.2.1 The place of Nepalese multigrade teaching.....257
11.2.2 The effectiveness of teacher training.....258

11.3Recommendations concerning innovations .....261
11.3.1 Improvement of the diffusion-oriented model .....262
11.3.2 Further research towards increasing awareness of the realities of multigrade schools.....264

Appendix 1 Map showing the place of the case study districts.....266
Appendix 2 Description of the training material for the trainees.....267
Appendix 3 Description of the training handbook for the trainer.....269
Appendix 4 Questionnaire distributed at the beginning of training.....271
Appendix 5 Evaluation form distributed at the end of training.....280
Appendix 6 Activities in Master Training for Trainers (MTOT) in Chitwan district.....288
Appendix 7 Activities in District Training of Trainers (DTOT) in Kavre district.....292
Appendix 8 Field note on Resource Centre Training (RCT) in Nuwakot district.....298
Appendix 9 Field note on Resource Centre Training (RCT) in Kavre district.....305
Appendix 10 Focus group discussions with Resource Centre Training (RCT) trainers....310

References.....313
Supplementary bibliography.....325

List of Tables


2-1 The frequency of multigrade teaching and the availability of specific policies in twenty-one developing countries.....30

2-2 Strategies and programmes for multigrade teaching.....32

2-3 Teacher training and other strategies for multigrade teaching.....35

2-4 Typology of countries in relation to multigrade teaching.....54

2-5 Three trends of class organisation.....55

2-6 Three trends of class organisation.....56

3-1 Status of multigrade teaching in Nepal.....58

3-2 Areas and population density per square kilometre in Nepal (1991).....59

3-3 Curriculum structure at primary level, by subject (hours/week).....65

3-4 Primary teacher qualification, by region (% in 1998).....65

3-5 Primary school teacher to school ratios in Nepal, by region (1998).....67

3-6 Primary school teacher to school ratios, by department and region (1998).....68

4-1 The framework of evaluation of teacher training .....90

4-2 Research methods used in the fieldwork .....97

4-3 Number of primary multigrade schools and teachers selected for understanding of multigrade teaching.....105

4-4 Multigrade training sessions observed for evaluation .....105

4-5 Number of training trainees researched in the evaluation .....106

5-1 Primary teacher-school ratios in Central department of the hill region (1998).....113

5-2 Estimated crop production in 1999 (m. tons).....114

5-3 Primary educational indicators in Nuwakot and Kavre districts.....116

5-4 Multigrade primary schools in Nuwakot and Kavre districts.....117

5-5 Primary teacher qualification in Nuwakot and Kavre districts (%/1998).....118

5-6 Number of teachers receiving in-service multigrade teacher training.....118

5-7 Location and size of case study schools in Nuwakot district.....120

5-8 Location and size of case study schools in Kavre district.....120

5-9 Physical facilities of the case study schools in Nuwakot district.....121

5-10 Physical facilities of the case study schools in Kavre district.....122

5-11 Community support for the case study schools in Nuwakot district.....123

5-12 Community support for the case study schools in Kavre district.....124

5-13 Frequency of visits by Resource Persons in the case study schools in Nuwakot district.....126
5-14 Frequency of visits by Resource Persons in the case study schools in Kavre district.....126
5-15 Characteristics of the headmasters and headmistress in Nuwakot district.....127
5-16 Characteristics of the headmasters and headmistress in Kavre district.....128
5-17 Teacher characteristics in Nuwakot district.....129
5-18 Teacher Characteristics in Kavre district.....130
5-19 Repetition rates in Nuwakot district (%).....131
5-20 Dropout Rates in Nuwakot district (%).....131
5-21 District Common Academic Test Score for Grade 5 in Nuwakot district (1999).....132
6-1 Combination of grades in Nuwakot district.....136
6-2 Combination of grades in Kavre district.....136
6-3 Formal timetable for Parvati primary school (SN5).....137
6-4 Formal timetable in Kartik primary school (SN7).....138
6-5 Theoretical morning lessons of Teachers A and B, timetable of Shakti primary school.....140
6-6 Actual practice of time allocation of Teacher A in Shakti primary school.....140
6-7 Formal timetable for Krishna primary school.....142
6-8 An example of time allocation for two grades, actions during one lesson.....143
6-9 Allocation of teacher time in Kali primary school.....144
6-10 Content and amount of SLA assigned at Kali primary school.....145
6-11 An example of SLA assigned at Kali primary school.....145
6-12 Formal timetable for Durga primary school.....146
6-13 Movement of Teacher B in Durga primary school.....146
6-14 Movement of Teacher B in Durga primary school, later research.....147
6-15 Lessons with whole class teaching.....148
6-16 Patterns of multigrade class organisation in the 12 classrooms of the mini case studies.....149
6-17 Multigrade class organisation among the teachers in the two RCs.....151
6-18 Coverage of textbooks for Grade 5 in three schools.....153
6-19 The characteristics and diversity of multigrade class organisation.....154
6-20 Is multigrade teaching different from monograde teaching?.....158
6-21 Do you have any problems when you teach multigrade classes?.....158
6-22 Types of problems with multigrade teaching for the teachers.....159
6-23 Necessary factors for solving multigrade problems, according to teachers.....161
7-1 Mapping of the models of educational innovation and change.....167

7-2 Three orientations and questions to examine the innovation model of Nepal.....176
7-3 Relation between contents and multigrade teaching.....181
7-4 Distribution of the training material.....184
7-5 Structure of Multigrade Teaching Training in the cascade system.....187
7-6 The expansion of the training in terms of the number of trainees.....190
7-7 Number of trainees who had Multigrade Teaching training before.....190
7-8 Number of headmasters and headmistress among the trainees.....191
7-9 Number of trainees and number of multigrade teachers.....191
7-10 Summary of orientations explaining the training model of Nepal.....194
8-1 Background information on trainers in Multigrade Teaching Training.....196
8-2 Training material covered by each trainers.....197
8-3 Model teaching by the trainer and practice teaching by the trainees.....199
8-4 Models of various types of diffusion.....201
9-1 Reasons why the trainees take the training.....204
9-2 Topics from the training curriculum and expectation of the trainees.....205
9-3 Effective training hours in Nuwakot district.....206
9-4 Time spent for training sessions in Nuwakot district.....206
9-5 Effective training hours in Kavre district.....207
9-6 Time spent for training sessions in Kavre district.....208
9-7 Trainee comments on the future of training in Kavre district.....213
9-8 Trainee comments on the future of training in Nuwakot district.....214
10-1 Trainee knowledge concerning multigrade teaching in Nuwakot district.....220
10-2 Trainee knowledge concerning multigrade teaching in Kavre district.....221
10-3 Most impressive components of the training in Nuwakot district.....222
10-4 Most impressive components of the training in Kavre district.....223
10-5 Knowledge concerning multigrade teaching before/after the training in Nuwakot district (1).....224
10-6 Knowledge concerning multigrade teaching before/after the training in Kavre district (1).....224
10-7 Knowledge concerning multigrade teaching before/after the training in Nuwakot district (2).....224
10-8 Knowledge concerning multigrade teaching before/after the training in Kavre district (2).....225

10-9 Knowledge concerning multigrade teaching of multigrade teacher-trainees in Nuwakot district.....227
10-10 Knowledge concerning multigrade teaching of multigrade teacher-trainees in Kavre district.....227
10-11 Practice teaching in Nuwakot district.....229
10-12 Information on the five trainees selected.....231
10-13 School information for the five trainees selected.....231
10-14 Knowledge concerning multigrade teaching of the five trainees selected.....232
10-15 Multigrade class organisation and adaptation of training components by Trainee Kavre-12.....232
10-16 Content and amount of SLA provided by trainee Kavre-12, pattern 2.....234
10-17 Multigrade class organisation and adaptation of training components by Trainee Kavre-4.....235
10-18 Multigrade class organisation and adaptation of training components by Trainee Nuwakot-B22.....236
10-19 Multigrade class organisation and adaptation of training components by Trainee Nuwakot-R2.....237
10-20 Multigrade class organisation and adaptation of training components by Trainee Nuwakot-B3.....238
10-21 Content and amount of SLA provided by trainee Nuwakot-B3, pattern three.....239
10-22 Changes in the classroom of trainee Kavre-12 after the training.....240
10-23 Changes in the classroom of trainee Kavre-4 after the training.....241
10-24 Changes in the classroom of trainee Nuwakot-B22 after the training.....241
10-25 Changes in the classroom of trainee Nuwakot-R2 after the training.....242
10-26 Changes in the classroom of trainee Nuwakot-B3 after the training.....242

List of Figures

3-1 Progress in the number of primary schools and teachers.....69
3-2 Student attainment in 8 schools within a VDC in Kavre district (2001/02).....72
3-3 Caste/ethnic groups and types of schools in a VDC in Kavre district (2001/02).....73
3-4 Student distribution of 8 schools in a VDC in Kavre district (2001/02).....73
6-1 Pattern two to five of multigrade class organisation for one lesson period.....139
6-2 Ladder of multigrade class organisation.....156
10-1 Multigrade class organisation 'Pattern 2+SLA'.....233
10-2 Movement of trainee Kavre-12 on the ladder of multigrade class organisation.....235
10-3 Movement of trainee Nuwakot-B3 on the ladder of multigrade class organisation..239

## List of Abbreviations

| | |
|---|---|
| ADB | Asian Development Bank |
| BNP | Basic Needs Programme (Nepal) |
| BPE | Basic and Primary Education Project (Nepal) |
| CERID | Research Centre for Educational Innovation and Development (Nepal) |
| DANIDA | Danish International and Development Assistance |
| DEC | Distance Education Centre (Nepal) |
| DEO | District education Office/Officer |
| DOE | Department of Education (Nepal) |
| DTOT | District Training of Trainers |
| EFA | Education for All |
| EU | European Union |
| FINNIDA | Finish International and Development Assistance |
| GER | Gross Enrolment Rate |
| HMG | His Majesty's Government (of Nepal) |
| IDA | International Development Association |
| IMPACT | Instructional Management by parents, Community and Teachers |
| INGO | International Non Governmental Organisation |
| JICA | Japan International Cooperation Agency |
| KG | Kindergarten |
| MGT | Multigrade Teaching |
| MTOT | Master Training of Trainers |
| MTP | Multigrade Teaching Project (UNICEF) |
| MOE | Ministry of Education (Nepal) |
| MOEC | Ministry of Education and Culture (Nepal) |
| MOES | Ministry of Education and Sports (Nepal) |
| MOESW | Ministry of Education, Culture and Social Welfare (Nepal) |
| NCED | National Centre for Educational Development (Nepal) |
| NESP | National Education System Plan in 1971(Nepal) |
| NER | Net Enrolment Rate |
| NGO | Non Governmental Organisation |
| NORAD | Norwegian Agency for Development |
| NPA | National Plan of Action (Nepal) |
| PEDP | Primary Education Development Project (Nepal) |
| PEP | Primary Education Project (Nepal) |
| PTTC | Primary Teacher Training Centre (Nepal) |
| PTTU | Primary Teacher Training Unit (Nepal) |
| PROAP | Principal Regional Office for Asia and the Pacific (UNESCO) |
| RC | Resource Centre |
| RCT | Resource Centre Training |
| SERDP | Seti Education for Rural Development Project (Nepal) |
| SIDA | Swedish International Development Authority |
| SLA | Self-Leaning Activity |
| SLC | School Leaving Certificate after completion of tenth Grade (Nepal) |
| SN | Serial Number |
| TOT | Training of Trainers |
| TTC | Teacher Training Centre (Nepal) |
| TU | Tribhuvan University (Nepal) |
| UNESCO | United Nations Educational Scientific and Cultural Organisation |
| UNICEF | United Nations Children's Fund |
| USAID | United States Agency for International Development |
| VDC | Village Development Committee |

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This research has been conducted within the framework of the Multigrade Teaching Project directed by Professor Angela Little. I appreciate her generosity to let me join this project. Working with a team has helped me to work more enthusiastically. The three annual workshops of the project have systematically forced me to meet precise deadlines, and have provided opportunities to present the current stage of my research and reflect on its findings. The colleagues of the team, coming from four different countries, have greatly encouraged me. Manjula Vidanapathirana in particular has supported me throughout the duration of this research, both professionally and emotionally.

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Fundamental field research skills were acquired during the Overseas Field Work Programme in Indonesia, organised by GSID, and the RRA/PRA Field Work Programme in Thailand, organised by the Foundation for Advanced Studies of International Development of Japan (FASID). I have been taught advanced English rhetoric through the JICA Expert Training Advanced English Courses in Tokyo. Careful and patient proof reading of this thesis has been done by Hartmut Ziche, who motivated and encouraged me to return to the academic field after years of absence following my first degree.

Finally, this research would not have been feasible without substantial financial support from Japan. This study was funded mainly by JICA, with supplementary funding from Rotary International and the Moriyasu Foundation. I am grateful for all financial support which has allowed me not to hesitate when it was necessary to extend any research activities.

It goes without saying that none of the individuals or organisations to whom I owe gratitude can or should be held responsible for any errors or shortcomings of my work.

# Preface

In March 1995, I was sent to inland Brazil to teach Japanese. This was my first experience of working in a developing country. When I went to the school on the first day, I was surprised, because there was only one teacher and one large classroom for several grades of students. Yes, it was a multigrade school. It was my first contact with multigrade teaching.

As most ordinary monograde teachers, I had a negative opinion on multigrade teaching. Especially because I was supposed to teach a second language, I thought that multigrade teaching was ridiculously nonsense. First of all, I did not know how to deal with multigrade students. I had never studied international development. I grew up in urban Japan. I had always been educated in a monograde teaching system. I had trained as a primary school teacher in a teacher training college, but the pedagogical techniques I had learnt were all for monograde teaching. Since I did not speak Portuguese, I had been trained to teach Japanese as a foreign language using direct teaching methods. I did not know what to do in a multigrade classroom.

During my stay in Brazil there were two opportunities to take in-service teacher training. Twice the local Brazilian teacher and I took the bus, each time for hours, once to São Paulo and once to the district capital, Presidente Prudente, to attend training. We expected the training to provide us with some solutions to improve our teaching. We needed training and did appreciate the opportunity for it. Therefore, on the bus going to the training course we were excited. By contrast, on the way back home we were exhausted with disappointment. My colleague kept repeating: 'It was interesting, but does not suit our school.' It is true in fact that the training was not useful at all for multigrade teaching. It focused on linguistics and language skills, using new teaching material. It would be useful only after we had successfully managed multigrade teaching. However, we were far from the level where we could have adopted the sophisticated new techniques presented during training.

I was frustrated, because I did not know how to teach multigrade classes without any theoretical knowledge on multigrade teaching. After several months of low quality teaching, I finally decided to put a stop to this. If teacher shortage was the cause of multigrade teaching, I would devote all my time to teaching. I restructured the school into several small monograde classes, instead of the one large multigrade class. In order to teach grade-wise I conducted oral and written placement tests for all students and formed groups of students with similar abilities. Then I happily started teaching classes using monograde teaching methods.

Teaching quality improved in the monograde classroom, but soon other problems arose and the classes had to return to multigrade teaching. Why? Because schooling also happened outside the classroom. The teacher was not only someone to teach in school, but was also the school bus driver – in fact the private van of my Brazilian colleague – and the cleaner of the school building. The school was not only a place to study a language, but also a place to participate in a cultural society and in social communication. Therefore, all students had to be together. The parents brought the children by car, but could not manage to send each child individually. They had to take brothers, sisters and neighbour children at the same time, hence classes had to be at the same time for everybody. I eventually realised that under these circumstances multigrade teaching was unavoidable. I finally admitted to face multigrade teaching.

In that small town, the choice was between multigrade teaching or nothing. In order to maintain access to education, multigrade teaching was unavoidable. However, few people including experts are aware of the reality of multigrade teaching. No support was available for multigrade teaching. Under such conditions, something had to be done for multigrade teaching to maintain the quality of education. No further innovations in teaching could be introduced before multigrade teaching had reached a level of sophistication and stability where it could adopt them. In the end I completely abandoned teaching.

The bitter experience in Brazil gave me a lesson to learn. If I was not prepared to wrestle with the reality of multigrade teaching, I could only abandon it. I could not understand the deep, fundamental significance of multigrade teaching. This experience, and consequent reflection, motivated me to immerse myself into serious research on multigrade teaching.

After returning to Japan in 1997, I entered Nagoya University to take a MA course in education and international development. There my senior colleague Chiaki Miwa introduced me for the first time to the Escuela Nueva, a systematic multigrade teaching programme run in Colombia. She was a good friend of Vicky Colbert, conducting school-based research in Colombia. While our lecturer, Professor Morikazu Ushiogi, was away for some weeks, visiting professor William Cummings gave me my very first academic lecture on multigrade teaching, based on his newly published book 'Quality Education for All' (1997). Of course this lecture dealt with multigrade teaching from an academic point of view, but it precisely confirmed the thoughts which had emerged from my own experience. As it happened, Professor Ushiogi had been away to visit the Escuela Nueva in Colombia. When he came back, he enthusiastically explained the system using piles of collected documents.

The experience of the first year of my MA studies increased the motivation stemming from my field experience. It encouraged me to want to write a dissertation on multigrade teaching. In 1998, I handed in a proposal to work on multigrade teaching. However at that stage my professors were against it, because, they said, it would be too difficult, given the scarcity of literature, the weakness of background theories and the difficulty of selecting a precise aspect of multigrade teaching to focus on. All this was true and indeed understandable. Reluctantly I abandoned multigrade teaching as a topic and wrote my MA dissertation on something else.

In March 1999, Professor Angela Little offered me to join her Multigrade Teaching Project at the Institute of Education. I was very surprised indeed. She said that she was going to tackle this difficult topic with a project team. I could not believe it. I read her project proposal many times. I hesitated about joining her project, because I knew that it would be difficult. However, in the end I decided to come back to London, because multigrade teaching had really been the reason why I had started development studies in the first place.

Today, conducting research on multigrade teaching is still a frontier. Very little research has been done so far. Multigrade teaching is often presented as second-rate teaching and negatively perceived. Thus there was no paved road and I often got lost. I cannot count how many times I have regretted not following the reasonable advice of my Japanese professors. However, ten project members were already on board, navigated by an experienced captain, Professor Angela Little, on a wide-open, undiscovered ocean, confronting the big waves of strong negative opinions, scarce literature and inaccessible information. Encouraged by our brave and energetic captain we were able to overcome these difficulties. This thesis is all about the story of our adventure – which I enjoyed all through.

Dedicated to my parents and my brother,
Akiko, Yasuo and Koichi Suzuki,
who have been giving me invaluable support,

as well as to
my grandmother, Shige Suzuki,
who could not wait for the completion of this thesis.

# Chapter One
# Introduction

## 1.1 Rationale for the study

Decades of effort towards universal education have brought rapid expansion of access to primary education for large populations in developing countries. Today, one of the most significant remaining issues is to increase the quality of education, especially for the most disadvantaged groups including the poor, rural communities, ethnic minorities and girls. In remote areas where these groups are living, primary schools are often organised as multigrade schools.

Multigrade schools, in which teachers are responsible for two or more grades simultaneously during one lesson period, are often in remote areas, because there is no way for children to gain access to other schools (Berry, 2001). Despite its significance, multigrade teaching has been overlooked by education policy makers in the research agenda, teacher training, curriculum, assessment, scholarships, teachers' guides and information networks (Little, 2001). Multigrade teaching is found in most countries over the world, but in general, many governments tend to underestimate the reality of multigrade teaching in their own countries. Country information about multigrade teaching, including its prevalence, has not been collected systematically (Little, 1995).

Educational administrators believe that multigrade teaching is a 'temporary aberration' (Berry, 2001: 17). Thus very little attention is given to multigrade schools (Wright, 2000). However, 'multigrade teaching will not disappear from the classroom, and its prevalence in certain settings may even increase' (Little, 2001: 492). In China, for example, the number of multigrade schools in rural areas is increasing, because of the decrease in the number of children enrolling in schools. The numbers of children in rural areas are decreasing because of family planning and population movements from rural to urban areas (Xiaozhen and Sen, PROAP, 1989). The annual rate of increase in multigrade schools in China was 6.6% between 1991 and 1992 (Lally, 1995). When the participants of the workshop on multigrade teaching in 1994 were asked whether the number of multigrade schools in their counties would increase in the future, those from China, Vietnam, Laos, Mongolia, Papua New

Guinea and the Philippines answered with 'yes' (Lally, 1995). In Papua New Guinea, the number of multigrade schools was expected to expand from 114 schools to 216 schools in 1995 (Lally, 1995).

The needs of multigrade teachers and their students are often overlooked (Little, 2001). Currently, monograde teaching dominates the basis of school and class organisation, as well as curriculum structures in many education systems (Little, 1995, 2001). Teachers are unsupported and not prepared to teach in multigrade classrooms (Rowley and Nelson, 1997). Multigrade teaching within the predominance of monograde conditions is not easy to conduct, especially for non-supported and untrained teachers. According to my own experience of multigrade teaching in Brazil, it is almost impossible to manage multigrade classes effectively only with the knowledge and skills of monograde teaching. Multigrade teachers struggle to teach in the gap between their own multigrade reality and the universal monograde norm without knowing what to do.

The apathy towards multigrade teaching is partly caused by the inferior status of multigrade teaching in comparison with monograde teaching (Berry, 2001). Monograde teaching is generally regarded as ideal and superior in academic and professional hierarchies (Little, 1995, 2001). However, when teachers are well prepared and supported, multigrade teaching affords opportunities unavailable in monograde teaching. It has the potential to promote active participation, independent attitudes, social manners, flexibility, higher academic achievement in some subjects and opportunities for students who have difficulties with commuting to school (Rowley and Nelson, 1997). It does this through cross-tutoring and the fostering of a strong integration between students, schools and the community (Psacharopoulos et al., 1993; Rowley and Nelson, 1997).

In fact, multigrade teaching produces no consistent differences in student achievement when compared with monograde teaching in mainly industrialised countries. The most recent review found no significant difference in student outcomes between multigrade and monograde teaching in nine out of 12 studies in industrialised countries, and no difference or some cognitive advantage for multigrade teaching in six studies in developing countries (Berry, 2001). No net student achievement differences were found in 18 studies (Mason and Burns, 1997). Veenman (1995) concludes that no consistent differences exist in both student cognitive and effective achievements between multigrade and monograde teaching, based on

56 studies in 12 countries. Miller (1990) also concludes that there is no significant difference between multigrade and monograde teaching. He also concludes that in some cases multigrade teaching leads to better academic performance among 13 quantitative studies.

Little (2001) insists on the need to do research on multigrade teaching, because of its high frequency and the correlation of multigrade teaching with the poorest and disadvantaged social groups, as well as its invisibility in the education system. Multigrade teaching is problematic in its demand for more skills in class organisation, its peripheral position, the disadvantaged student background, the availability of less resource, and its isolation (Berry, 2001). Despite of the prevalence of multigrade teaching, policy makers have not recognised its significance. Therefore, it is necessary to raise awareness among them of the current situation of multigrade teaching.

## 1.2 Previous research

Little research on multigrade schools has been conducted in developing countries (Berry, 2001). The research on multigrade teaching has been carried out mainly in industrialised countries, including the United States, Canada, the United Kingdom, Germany, the Netherlands, and Australia (Berry, 2001; Mason and Burns, 1997; Miller, 1990; Veenman, 1995).

The study of Knight (1938) seems to be one of the earliest studies on multigrade teaching. Yet multigrade teaching gained significant interest from educational researchers only more recently. Investigations seem to increase in the United States in the 1960s and 70s, following the great interest attracted by team teaching, individualised instruction and student-centre models (Bishop, 1971; Nussel et al., 1976). Multigrade teaching has been encouraged by the federal government as a major educational innovation (Miller, 1990).

Under these circumstances, the mission of the research is often to justify multigrade teaching as an effective educational measure, and to assess its effectiveness. The most common research on multigrade teaching is the inquiry into the effectiveness of multigrade teaching, concerning student cognitive and/or effective achievements compared with those under monograde teaching (Adams, 1953; Brown and Martin, 1989; Dreier, 1949; Finley and

Thompson, 1963; Galton et al., 1980, Galton and Patrick, 1990; Harbison and Hanushek, 1992; HM Inspectors of Schools, 1978; Knight, 1938; Martens, 1954; Mason and Burns, 1997; Milburn, 1981; Miller, 1990; Pratt, 1986; Schrankler, 1976; Veenman, 1995, 1996; and Veenman et al, 1985).

In most of these studies, the main indicators of outcome are test scores. The research design tends to follow a pre-test-treatment-post-test pattern. Detailed descriptions of practice, explaining what actually happens in the classroom, are largely absent. Miller (1990) suggests that further studies using qualitative measures to understand how teachers plan, prepare and teach in multigrade classrooms are needed. Little (2001) suggests that detailed and specific information must be generated out of rigorously conducted research based on specific contexts.

Using a more qualitative approach, international agencies such as UNICEF and UNESCO sponsor workshops and publish reports on multigrade teaching (Birch and Lally, 1995; CERID, 1989a; PROAP, 1982, 1989). The reports provide theoretical frameworks and propose implementations. These reports are mainly based on opinions, discussions and national statistics. An assessment of multigrade teaching in Vietnam revealed that the ideal model of multigrade teaching in the demonstration schools was far removed from the reality of ordinary multigrade schools (Aikman and Pridmore, 1999).

Although few in number, some qualitative studies have been carried out, including developing countries. Eight rural multigrade primary schools in Nepal have been studied to understand current practice, problems, and their potential solutions (CERID, 1988). Four primary schools in Zambia have been compared to identify the successful introduction and operation of multigrade teaching (Lungwangwa, 1989). Some studies concerning factors influencing multigrade schools have been conducted in Colombia (Benveniste and McEwan, 2000; Miwa, 1996).

### 1.3 Approach to the study

The main focus of previous research in industrialised countries has been the comparison of monograde and multigrade teaching. This approach is often also adopted in developing

countries, including the Caribbean islands, Colombia and Pakistan (Berry, 2001; McEwan, 1998; Noonan and Hallak, 1987; Psacharopoulos et al., 1993; Rojas and Castillo, 1988, cited in Colbert et al., 1993; and Rowley, 1992). However, this is not always the most useful focus. A focus on the relative impact on achievement is not useful, when the policy choice is between multigrade versus no school rather than between multigrade and monograde school (Little, 2001).

Although this study focuses on multigrade teaching, it does not mean to promote multigrade teaching as an ideal method to replace monograde teaching. It aims to bring the reality of multigrade teaching to the attention of policy makers and researchers. Little (2001) insists that valuable information for policy makers must arise from an understanding of specific contexts, and information about the current status and condition of multigrade teaching must be collected in order to understand the reality. Thus this study mainly focuses on a qualitative approach through rigorous research, in order to understand current policies, strategies, practices, perceived problems and needs in multigrade teaching, and to examine the impact of the strategies designed to improve the practice of multigrade teaching in Nepal.

Nepal has been selected for a case study firstly because its geographical and socio-economic conditions result in a great number of multigrade schools. Secondly, previous qualitative research exists on which this study can be built and to which it contributes. Thirdly, the government has been implementing educational projects including multigrade teaching as one of their key features (MOE, 1999a).

## 1.4 Research questions

In order to understand the policies and practices of multigrade teaching in Nepal, this study poses the following five research questions and a series of sub-questions. The first research question aims to understand the system characteristics of multigrade teaching tackled through secondary resources. In this question, 'policies' refers to 'a set of ideas on the attitude and actions regarding a particular issue that is used as a basis for decision making' and 'strategies' refers to 'a set of plans intended to achieve something or to gain an advantage' (The University of Birmingham, 2001). The second and third research questions are posed in order to understand the practice of multigrade teaching through field research conducted in

multigrade schools in Nepal. The fourth and five research questions consequently emerged from the findings of the previous questions and address the interaction between the policies and the practice of multigrade teaching through evaluating Multigrade Teaching Training.

(1) What are the contemporary and historical characteristics of multigrade teaching in the education system of Nepal?

(1-1) What is the current and historical extent and situation of multigrade teaching in primary schools?

(1-2) What are the graded characteristics of the contemporary National Education System and how did they emerge?

(1-3) What are the current teacher training strategies for multigrade teaching and how did they emerge?

(2) What are the characteristics of multigrade primary schools in Nepal?

(2-1) What are the school contexts of multigrade primary schools?

(2-2) What are the school inputs of multigrade primary schools?

(2-3) What are the school outputs of multigrade primary schools?

(3) What are the characteristics of multigrade teaching in classrooms in Nepal?

(3-1) What is the condition of multigrade classrooms?

(3-2) How do teachers currently organise multigrade teaching in classrooms?

(3-3) How do teachers teach in multigrade classrooms?

(3-4) What does the researcher consider to be problems in multigrade classrooms?

(3-5) What do teachers consider to be problems in multigrade classrooms?

(3-6) What do teachers consider to be needs in multigrade classrooms?

(4) What are the characteristics of current teacher training?

(4-1) With regard to current literature: what is the orientation of training?

(4-2) Which models of innovation and change best explain current training features?

(5) Do training policies address the problems of multigrade classrooms and improve knowledge, competence and performance of teachers in multigrade classrooms in Nepal?

(5-1) What are the ideal models of multigrade teaching according to the national training

policies?

(5-2) What are the characteristics of the training package?

(5-3) Who are the organisers of training for multigrade teaching?

(5-4) How are the training policies transferred from central to school levels?

(5-5) Who are the trainees of training?

(5-6) What takes place during training?

(5-7) How do the trainees appreciate training?

(5-8) How is follow-up support for the trainees?

(5-9) What knowledge and competence have the trainees acquired though training?

(5-10) What is the impact of training on teacher's performance in the classroom?

(5-11) How do the trainers evaluate training?

## 1.5 Organisation of the study

This thesis consists of eleven chapters. Chapter Two reviews the literature on multigrade teaching in developing countries. It describes national policies on multigrade teaching, subordinate strategies adopted for multigrade teaching, the conditions of multigrade schools, multigrade class organisation and perceived problems that multigrade teachers are facing in the classroom in developing countries.

Chapter Three addresses the first research question, mainly based on secondary resources, with reference to *system characteristics* of multigrade teaching in Nepal. It describes the national education system and primary education, the extent of multigrade teaching, the policies on multigrade teaching, the graded characteristics of the national education system, the current strategies for multigrade teaching, their emergence and past development, and the current strategies for multigrade teaching in Nepal.

Chapter Four outlines the research design and the methods used to collect and analyse data in the field. This is necessary to address the second, third, fourth and fifth research questions. It clarifies the theoretical, methodological, ethical and analytical concerns of the study.

Chapter Five addresses the second research question and describes the characteristics of *multigrade primary schools* in Nepal. Accompanied by contextual information for the

selected districts, the characteristics of the visited schools are described, including the location and size of the schools, the condition of physical facilities, community support, curriculum and teaching materials, supervision, the characteristics of school leaders and teachers, as well as student attendance rates and academic achievement.

Chapter Six addresses the third research question and describes the characteristics of *multigrade classrooms* in the visited schools. After the structure of multigrade classrooms has been described, five patterns of multigrade class organisation are identified. Alongside the class organisation, the perceived problems and needs of multigrade classrooms are identified.

Chapter Seven addresses the fourth research question and it explores the characteristics of *Multigrade Teaching Training*. This follows the conclusions of Chapters Two and Three, i. e. that Nepal indeed conducts teacher training as a strategy for multigrade teaching, and of Chapter Six which identifies teacher training as a factor potentially necessary for the improvement of multigrade teaching. Chapter Seven describes Multigrade Teaching Training with regard to the literature on educational innovation and change.

Chapters Eight to Ten address the final research question, evaluating the effectiveness of current training policies. Chapter Eight presents the results from *the input evaluation* of Multigrade Teaching Training. It explores the ideal models of multigrade teaching according to the national training policies: who are the authors and trainers of the teacher training, how are the training policies transferred from central to school levels in the cascade system, and who are the trainees of the teacher training? Chapter Nine presents the results from *the process evaluation* of Multigrade Teaching Training. It explores what in fact takes place during teacher training. Chapter Ten presents the results from *the output evaluation* of Multigrade Teaching Training. It explores how the trainees appreciate the training, the availability of follow-up support for the trainees, what knowledge and competence the trainees acquire though the training and how the training influences classroom practices.

Finally, Chapter Eleven summarises the findings of the study in the light of current literature and makes recommendations regarding the practical implementations of teacher training and further research on multigrade teaching.

# Chapter Two
# Policies, Strategies and Practice of Multigrade Teaching: A Review of Experience in Developing Countries

The previous chapter has underlined the importance of the study of multigrade schools. This chapter explores multigrade teaching in developing countries. The review of existing literature assists the identification of the place of Nepal within the international context. The first section explores national policies on multigrade teaching. The second section reviews subordinate strategies adopted for multigrade teaching. The third, fourth and fifth sections clarify the current practice of multigrade teaching, review the conditions of multigrade schools, and determine how multigrade classrooms are organised.

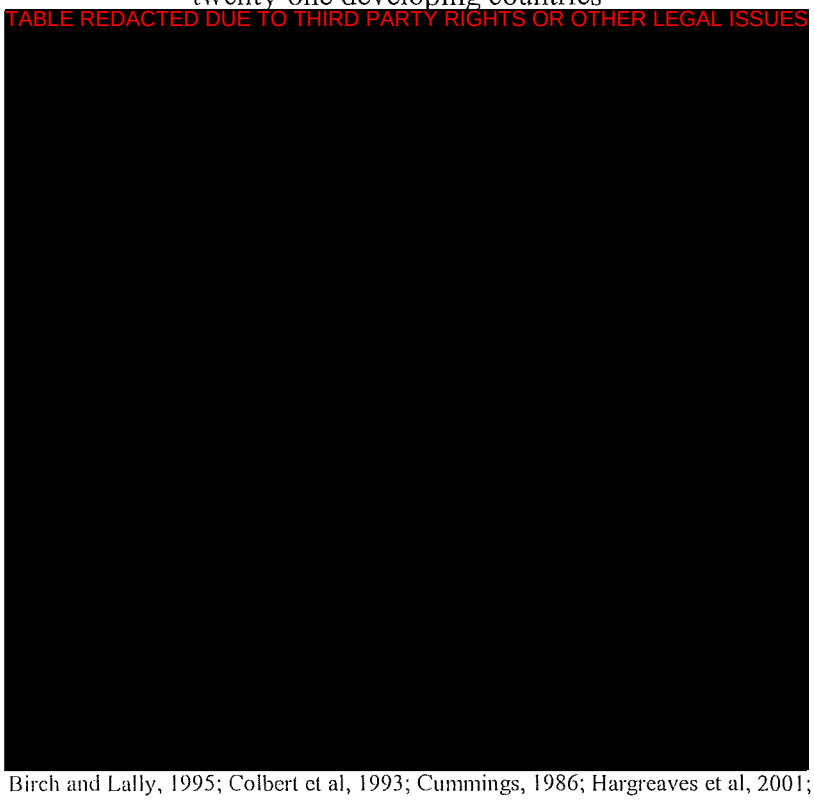
## 2.1 Literature on policies for multigrade teaching

### 2.1.1 Policy diversity

There are a great number of multigrade primary schools in many countries (Little, 1995). Table 2-1 indicates the frequency of multigrade schools in 21 developing countries, including percentages as high as 78% in Peru (1998), 63% in Sri Lanka (1999) and 62.03% in India (1998). Despite this significant frequency of multigrade schools, few countries have adopted clear policies indicating their position and policies for multigrade teaching. Birch and Lally's (1995) review of the policies for multigrade teaching in seven countries[1] and a workshop on 'Managing Schools for Better Quality' with nine participating countries[2] reveal that some countries do not have any policy for multigrade teaching, others have unclear policies for multigrade teaching, and a third group have policies for multigrade teaching which are not implemented (Lally, 1995). In fact, all of the 21 countries in Table 2-1 have a relatively high number of multigrade schools, but only five countries have clear policies for multigrade teaching.

[1] The seven countries are China, Indonesia, Malaysia, Nepal, Pakistan, the Philippines and Vietnam.
[2] The nine countries are Bangladesh, Cambodia, China, Laos, Mongolia, Burma (Myanmar), Papua New Guinea, the Philippines and Vietnam.

Table 2-1 The frequency of multigrade teaching and the availability of specific policies in twenty-one developing countries




Source: Birch and Lally, 1995; Colbert et al, 1993; Cummings, 1986; Hargreaves et al, 2001; Lally, 1995; Little, 2001, 1995; Lungwangwa, 1989; Miguel and Basarga, 1997; MOE, 2000; Odyek-Ocen, 2000; PROAP, 1982, 1989; Ratnaike, 1987; Swarnalekha, 1999; Tatto, 1999a; Wright, 2000

### 2.1.2 Countries with policies directly related to multigrade teaching

Five countries have formally adopted clear policies on multigrade teaching and recognise the role of multigrade teaching as a form of pedagogy in its own right. These are Colombia, Indonesia, the Philippines, Uganda and Vietnam.

In 1967 the government of Colombia issued a decree promoting the Unitary School for all schools with one teacher in sparsely populated zones (Colbert et al, 1993). Indonesia gives a unique status to multigrade schools and single teacher schools through the legislation. Compatibility between multigrade schools and monograde schools in terms of evaluatio12 n is required, and the community is required to contribute to multigrade teaching (Birch and Lally, 1995). In the Philippines, the government has formulated policies for organising more multigrade schools (Birch and Lally, 1995). In order to be included as part of the National Development Plan 1993-1997 of the Department of Education, Culture and Sports (DECS), multigrade teaching was legitimised as a national policy. This was meant to

expedite complete national coverage for primary schools offering Grades 1 to 6. DECS Order No. 38, s. 1992. The order is entitled 'Improving access to elementary education by providing complete grade levels in all public elementary schools though combination and/or multigrade classes' (Miguel and Basarga, 1997). In Uganda, following the findings of the Education Policies Review Commission, set up to formulate new policies for education to match the realistic needs in 1987, the Ministry of Education and Sports has included multigrade teaching as one of the systems meant to solve the problem of mass education (Odyek-Ocen, 2000). Similarly in Vietnam, the government has legitimised the existence of multigrade schools by a 1993 law. The law regulates some strategies. Teacher training for minority people and extra salary for multigrade teachers were included in the law. At the same time, multigrade schools are required to accept all children who wish to enter school, and repetition and dropout of students are not allowed (Birch and Lally, 1995).

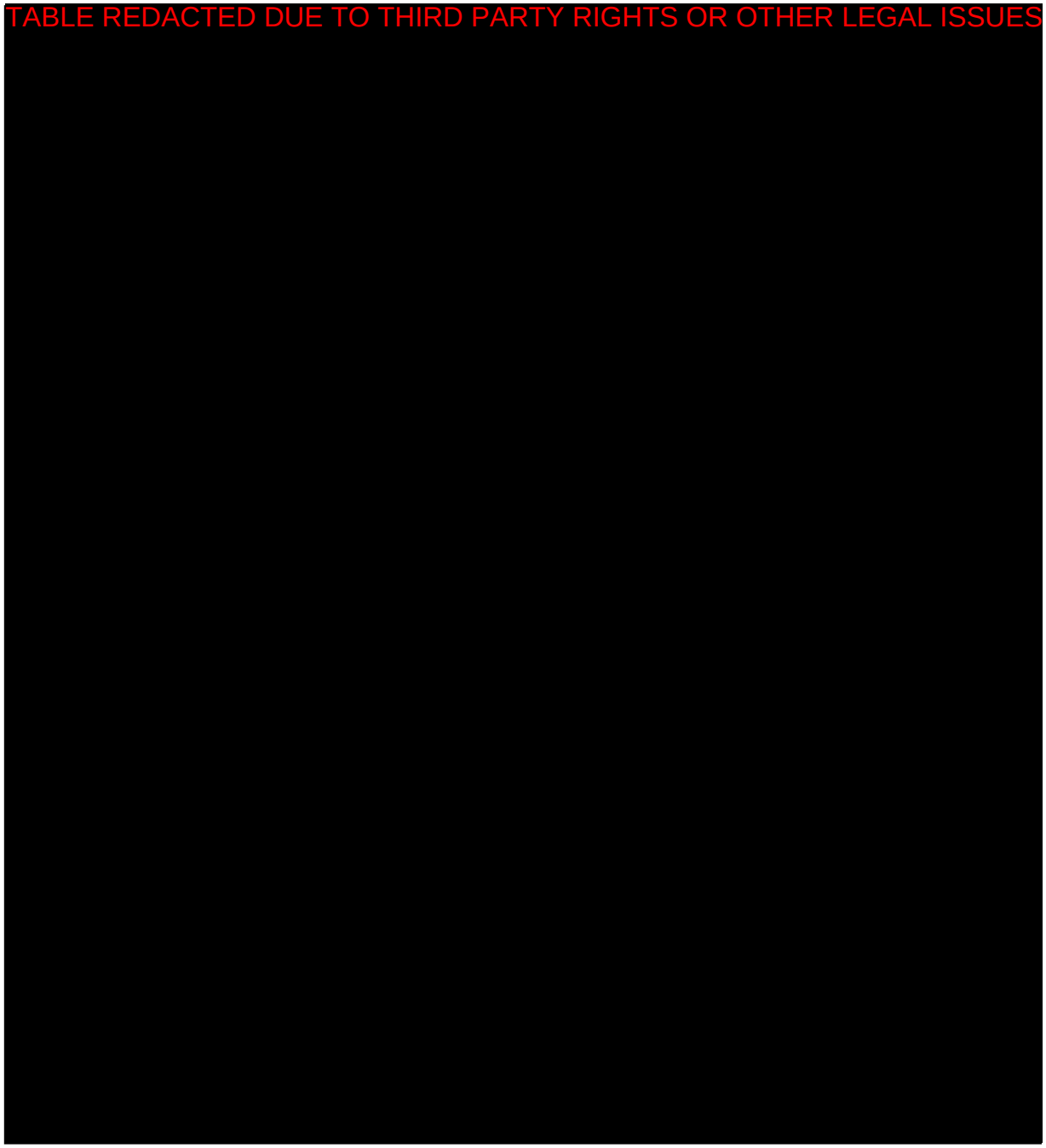
### 2.1.3 Countries without policies directly related to multigrade teaching

In contrast, the other 16 countries do not have clear policies for multigrade teaching (Birch and Lally, 1995). Although the frequency of multigrade schools is relatively significant, they do not attract enough attention to prompt the formulation of clear policies.

Some countries have specific policies for rural education or indigenous minorities, but there is no explicit reference to multigrade teaching. In China, based on special policies relating to minority groups, some innovations in multigrade teaching have been introduced (Birch and Lally, 1995). In India, a 1986 national policy programme, called Operation Blackboard, envisaged a special scheme for improving the conditions of small schools in rural areas (Goyal, PROAP, 1989). In Mexico, the National Modernisation programme for the rural poor was established in the early 1990s. It was followed by the National Agreement to modernise education and the Education Development Programme in 1995. However, these policies are not directly related to multigrade teaching (Tatto, 1999a). In Peru, very similarly, the Quality of Rural Education Improvement Project (PMCER in its Spanish abbreviation) started in 1998, aiming to eliminate the administrative isolation of rural teachers through a new education network (Hargreaves et al, 2001). However, a clear statement on multigrade teaching was not included in these policy statements.

## 2.2 Literature on strategies for multigrade teaching

Table 2-2 Strategies and programmes for multigrade teaching




Of the 21 countries listed in Table 2-2, five countries have a specific policy of multigrade teaching, 15 more countries are implemented some strategies for multigrade teaching. There are two types of strategies: combined and single strategies.

### 2.2.1 Combined strategies

Nine countries combine two or more different, but inter-related strategies. Three combinations of strategies for multigrade teaching are apparent. First, the New School (Escuela Nueva) of Colombia combines six inter-related strategies.[3]

Second, the Multigrade Teaching Project of UNICEF has developed a multigrade teaching model with combined strategies, implemented in several countries, including the Philippines and Vietnam. In the Philippines, seven strategies are combined.[4] In Vietnam, the Project combines eight strategies.[5] Additionally, the government plans to include multigrade teaching in the pre-service training in relevant provincial colleges, and to provide regular in-service training for multigrade teachers (Hargreaves et al, 2001).

Third, the Instructional Management by Parents, Community and Teachers (IMPACT) Project, carried out in the Philippines, Indonesia, Malaysia, Jamaica, Liberia and Bangladesh in the 1970s and 1980s, combines six common strategies.[6] Individually, in the Philippines,

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[3] (1) teaching materials with self-instruction study guides for the school library to promote active learning and group decision-making, (2) a series of in-service teacher training and monthly follow-ups, (3) workshops for local support, (4) demonstration schools and micro-centres, (5) community participation and (6) administrative workshops (Colbert et al, 1993). Uganda has adopted three of these strategies in combination. These are (1) community mobilisation, (2) use of teachers' manuals and self-instruction study guides adjusted for the Ugandan context, and (3) teacher training in co-ordinating centre for tutors and teachers, including several workshops (Odyek-Ocen, 2000).

[4] (1) in-service training for multigrade teachers for one week and monthly follow-up meetings in model schools; (2) teacher guides for multigrade teaching, called "Multigrade Instructional Packages", including Minimum Learning Competencies for Multigrade, Budget for Work, Sample Lesson Plans, and Multigrade Teacher's Handbook, to be distributed to trainee-teachers, headmasters and supervisors; (3) self-learning materials for children in multigrade classes called "Multigrade Materials" covering English, mathematics and Filipino; (4) a whole multigrade school system including local and community support based on the Colombia model; (5) an additional bonus, up to 25% of basic salaries, for multigrade teachers and 200 pesos for each teacher to prepare material and to participate in monthly meetings; (6) 100 books per school for the school library; and (7) special tables and chairs for group work, also water tanks for some schools (Aoki, 1998).

[5] (1) infrastructure including school buildings; (2) a special multigrade syllabus alongside the national curriculum; (3) supplies of teaching and learning materials including mathematics and Vietnamese textbooks, satchels, workbooks, guidebooks and learning resource kits for children; and (4) a pre-service three-month teacher training with eleven training modules, including the use of walls and available space in the classroom; grouping; how to learn; leaning through playing games; selection of local topics; and bilingual education, accompanied by professional development materials and assessment materials for teachers to evaluate their students; (5) demonstration schools with expert teachers used for training new teachers; (6) Thursday meetings for teachers to share their experience; (7) community and parental involvement; (8) incentive allowance of 50% for teachers who teach two grades and 75% for those who teach three or more grades, also at least double salaries for some teachers who work two teaching shifts per day (Aikman and Pridmore, 2001; Birch and Lally, 1995; Hargreaves et al, 2001; Meyenn et al., 1994).

[6] (1) the development of non-graded modular self-instructional material for children to proceed at their own pace; (2) self-paced instructional radio programme sessions under the guidance of instructional supervisors; (3)

the Project combines three strategies.[7] Indonesia developed three multigrade teaching models within the framework of the IMPACT project: PAMONG (Education of Children by Community, Parents and Teachers), a primary school model, as well as two non-formal school models, GURU-KUNJUNG, and a visiting teacher model. (Birch and Lally, 1995). In PAMONG primary schools, the project combines eight strategies.[8] In Malaysia, the Integrated System of Programmed Instruction for Rural Environment, within the framework of the IMPACT project combines four strategies.[9] In Jamaica, the Project for Reshaping and Improving Management of Educational Resources, within the framework of the IMPACT project, combines mainly three strategies.[10] Similarly, in Liberia, the Improved Efficiency for Learning project combines two strategies.[11]

### 2.2.2 Single strategies

Unlike the projects with combined strategies, the remaining six countries have implemented single strategies without further inter-related strategies.

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an instructional supervisor instead of the allocation of one teacher per grade at a school, (4) teaching assistance from students, parents and the community (for example, community volunteer teachers teach vocational skills, primary-school graduates give courses in reading and other subjects, parents take responsibility for motivating their children and monitoring their progress); (5) only a few set class periods during the day, without a prescribed schedule for completing non-graded modules; and (6) a simplified school administrative organisation with no specific age requirements for entry (Cummings, 1986).

[7] (1) in-service training or IMPACT training, (2) physical facilities including classrooms, home economics buildings, industrial arts buildings, desks, kiosks, long tables, blackboards, teachers' desks and chairs, office furniture, filling cabinets, typewriters, mimeograph machines and bookshelves, and (3) learning materials including modules, textbooks, reference books, science kits, radios, industrial arts tools, home economics sets, chalk, paper, maps, charts and exercise paper for children (Cummings, 1986).

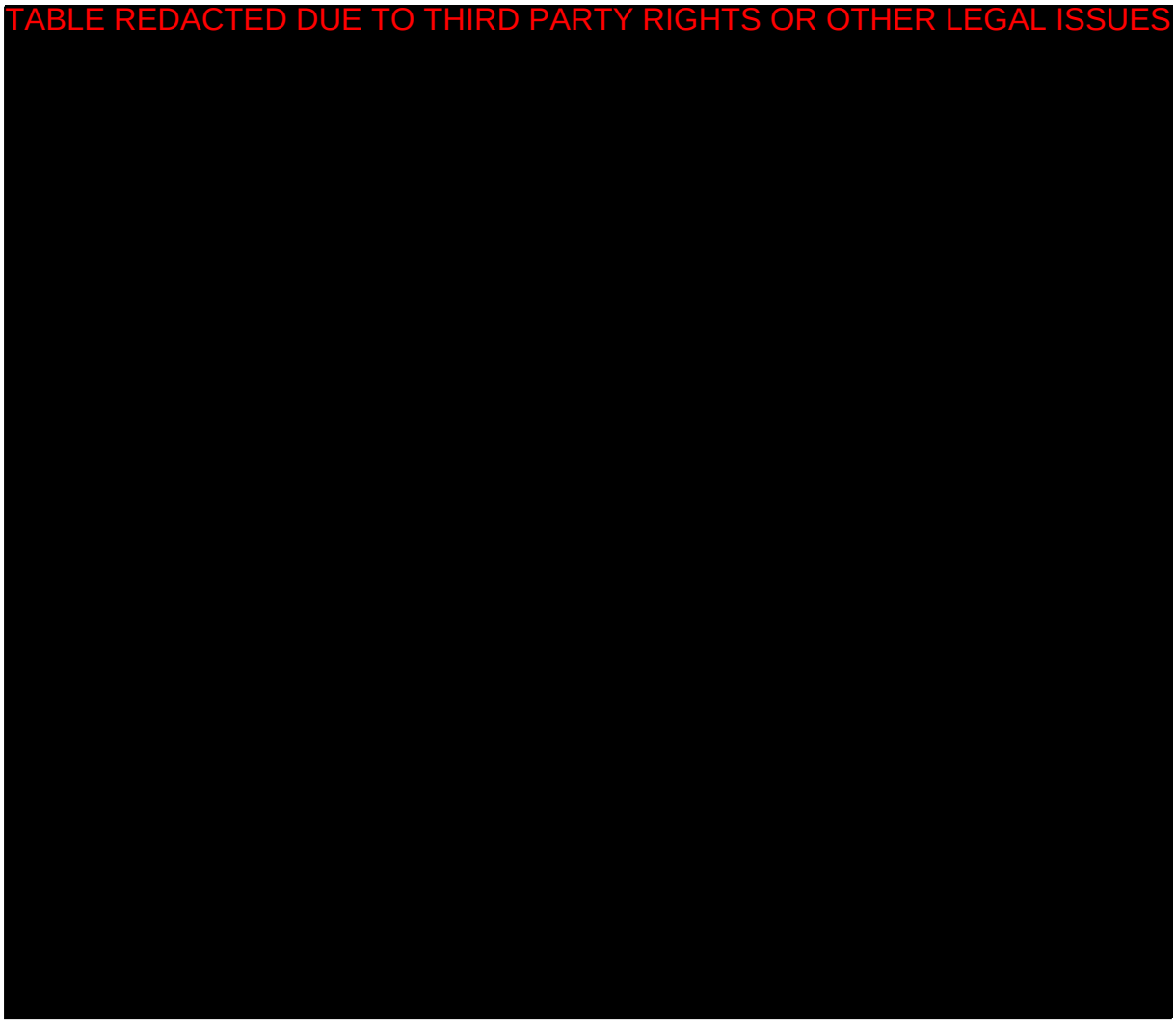
[8] (1) self-instructional modules for two subjects; (2) peer-group tutoring by more intelligent students of the same or superior grades; (3) traditional monograde teaching for Grade 1; (4) annual in-service training for multigrade teaching; (5) the provision of three-room schools with a house for the teacher; (6) seating arrangements for small group discussions within the same grade level; (7) a basic self-evaluation system as well as evaluation based on the national examination programme; and (8) a clear distinction of administrative and supervisory regulations between monograde schools and PAMONG schools in terms of classroom management, activities and community relationships (Birch and Lally, 1995; Cummings, 1986; Hadisoebroto and Mihing, PROAP, 1989).

[9] (1) a week-long workshop for headmasters and teachers providing management and administrative abilities needed in multigrade schools; (2) new free materials such as modules and teaching guides; (3) attractive worksheets and various teaching aids; and (4) peer group teaching with parental or community involvement (Cummings, 1986; Sulaiman, PROAP, 1989).

[10] (1) curriculum analysis, (2) development of materials, and (3) training for teachers and community members.

[11] (1) a study tour for 13 trainees to Indiana to attend a three-month training course, as well as (2) material, including modules for Grades 1 and 2 for programmed learning, for Grade 3 for transition learning, for Grades 4 to 6 for programmed learning (Cummings, 1986).

Table 2-3 Teacher training and other strategies for multigrade teaching




Little (2001) reviews strategies for multigrade teaching in five studies and reveals that the main strategy is teacher training. My own review in Table 2-3 also indicates that the most common strategy for multigrade teaching is teacher training in the 21 countries including Belize. China, Colombia, India, Indonesia, Jamaica, Korea, Liberia, Malaysia, Nepal, Uganda. Vietnam and Zambia. Among these, Belize, China, India, Indonesia, Korea, Nepal and Zambia conduct only teacher training. In Belize, based on a 1993 study, the Teachers' College has developed training modules to provide training in multigrade teaching (Wright, 2000). In China in 1987, the Hebei provincial research and training centre was established and has carried out research and training for multigrade teaching (Xiaozhen and Sen, PROAP, 1989). Pre-service teacher training courses include a thirty-six hour course to introduce multigrade teaching (Birch and Lally, 1995). Korea organises teacher training for multigrade teaching (Yung, PROAP, 1989). Nepal includes two or three lectures on

multigrade teaching in the two-year pre-service training course and a special in-service teacher training course for multigrade teachers (Birch and Lally, 1995). In Zambia, in-service training courses in multigrade teaching have been developed (Little, 1995). In these countries, teacher training is not systematically supported by any other strategy such as curriculum development and special arrangements for physical facilities.

Some countries have adopted other approaches to multigrade teaching. In India, teacher guides on multigrade teaching and videocassettes, combined in a multimedia kit for one-teacher schools, have been designed (Goyal, PROAP, 1989). The Maldives have adopted a shift system in order to avoid the need for multigrade strategies (according to recent information by a researcher, 2000).

### 2.2.3 Two perspectives on multigrade teaching

The comparison of combined and single strategies reveals two distinct perspectives on multigrade teaching. The first is the design of innovative programmes for multigrade teaching as a form of pedagogy in its own right. In this context, multigrade teaching is considered as a positive pedagogical strategy to improve access and quality of rural education for all. Combined inter-related strategies correspond to the needs of rural schools. They are based on pedagogical theories and supported by formal statements and legalisation of the nation concerned. The second is its use as a temporary measure. In this context, multigrade teaching is considered an unintentional outcome of the expansion of schooling. It is seen as a problem which diminishes the quality of rural education for all, rather than a strategy for improving it.

#### 2.2.3.1 Multigrade teaching as an innovation for quality rural education for all

*Multigrade movement in Latin America in the 1960s and 1970s*

One of the origins of innovation in multigrade teaching is the Unitary School Programme promoted by UNESCO in 1961. The Unitary School is a pedagogical, well-planned, innovative strategy, based on pedagogical theory, meant to improve access to complete-primary schools and to enhance the quality of teaching, accordant to needs of rural schools with low population density (Colbert et al, 1993). The pedagogical theory background of the Unitary School methodology is the Active School in 'Individualised Education' of Dottrens

(1949), which adopts methods, including individualised instruction, active learning, use of textbooks, multigrade teaching, multiple divided blackboards, and automatic promotion, designed to replace traditional teaching methods such as memorisation, copying lessons from the blackboard and repetition in unison (Colbert et al, 1993; Schiefelbein, 1991). Colombia instituted the Unitary School by a decree of 1967. Eventually in 1975 Colombia created its own multigrade teaching model, The New School programme. The New School programme became a top priority for the education sector, approved by the government as one of the five pillars of government planning (Colbert et al, 1993).

*IMPACT in South East Asia in the 1970s and 1980s*

IMPACT was developed as a new flexible, low-cost education system based on the 'No More Schools' concept which reflects Ivan Ilich's 1970 'de-schooling' theory. Multigrade teaching has also been a financial tactic. Since teachers make up 80 to 90% of unit costs in monograde schools, multigrading can reduce unit costs through the allocation of a single teacher instead of the allocation of one teacher per grade. Additionally, multigrade teaching was expected to reduce missed lessons, falling behind of students and a high dropout rate. This was expected because of the flexibility afforded by self-instruction (Cummings, 1986).

*Multigrade Teaching Project of UNICEF in the 1990s*

UNICEF considers multigrade teaching a strong strategy for rural schools and has developed a package with its own multigrade teaching models based on a child-centred approach, active learning and joyful learning. In Vietnam, the project was introduced by the government in a law of 1993 (Birch and Lally, 1995). In the Philippines, the project gained official support, because it was hoped that it would increase the number of complete primary schools of six grades. The Department of Education, Culture and Sports (DECS) introduced the project by legislation on multigrade teaching as a national strategy and its inclusion in the National Development Plan 1993-1997.

2.2.3.2 Multigrade teaching as a temporary measure

Most UN members have made constitutional provisions for achieving the goal of Universal Education for All. Efforts to provide comprehensive access to primary education have led to the establishment of a large number of primary schools. These are supported by the

recognition of the immense value of adequate education policies for the nation. Equity of educational opportunity is sought for millions of learners living in remote, sparsely populated and inaccessible areas. Even though member countries have legislated for Universal Primary Education and established primary schools in rural areas, adequate attention to the proper functioning of these schools is still a long way off. As a result, it is generally not recognised that there are many multigrade primary schools in almost every country (PROAP, 1989).

Following the immense efforts of many countries to expand primary education, a misbalance between quantitative expansion and consistent quality of education was recognised by the late 1960s. The education plans prepared in the late 1960s and early 1970s, reviewed by Lockheed et al. (1991), started to emphasise qualitative objectives, social equity and rural needs. A shift of national policies from the quantitative expansion to reach all students, to quality and equity of education for all is proceeding only slowly.

Under these circumstances, the rationale for implementing strategies for multigrade teaching in some countries was restated by the Universal Primary Education and the Declaration of Education for All (Birch and Lally, 1995; Lally, 1995; PROAP, 1989). Although a policy statement on multigrade teaching is not found here, national statements on EFA present justifications for multigrade teaching strategies. When evaluating rural needs in the context of improving the quality of rural education, some countries came across the existence of 'unintentional' multigrade schools. In disadvantaged communities schools often turned out to be multigraded. The frequency of multigrade schools was indeed non-negligible. Teaching quality in multigrade schools was problematic. Therefore countries, which realised the significance of multigrade teaching in relation to rural education and saw the necessity of introducing provisions for it, implemented a temporary strategy, without formal statements or legalisation on the part of the nation.

### 2.2.4 Countries without strategies specifically targeted at multigrade teaching

The remaining five countries of my study, Mexico, Peru, Pakistan, Sri Lanka and Thailand, do not have particular strategies for multigrade teaching. Although Mexico re-defined the role of teachers, and refined teacher training, the pedagogical network, and free materials for new teaching, as well as the curriculum for the quality of rural education, these measures are

not particularly designed for multigrade teaching (Tatto, 1999a). In Pakistan, there is no official concept of multigrade teaching and no special curriculum in teacher training, despite an experiment of an integrated curriculum which was conducted to reduce the burden for teachers in the 1980s (Veryamani, PROAP, 1989). Multigrade teachers are expected to acquire the strategies and techniques through their own experience and experimentation (Birch and Lally, 1995). Peru, while searching for multigrade methods, has a project for rural education which tries to design an alternative strategy for the organisation of classroom work, meant to support the appropriate allocation of time and use of materials and promote pedagogical elements. Yet, it is still in the stage of elaboration. Although some NGOs are implementing rural education projects, their projects lack a multigrade point of view (Hargreaves et al, 2001). In Sri Lanka, little attention has been paid to multigrade teaching, although an innovative movement is just about to start which includes a new curriculum for the primary level. It introduces methods to enhance multigrade teaching, teacher training for a limited number of teachers, and an attempt to include multigrade teaching in the primary mathematics syllabus of the new curriculum for the college of education (Hargreaves et al, 2001). In Thailand, no particular strategy for multigrade teaching exists, although informally the education department has a revised curriculum and instruction plans meant to be more suitable for multigrade teaching (Yeerong, PROAP, 1989).

## 2.3 Literature on the context of multigrade schools

### 2.3.1 The location of multigrade schools

Multigrade schools are often located in remote and sparsely populated areas where schools are widely scattered and inaccessible (Little, 1995; Nielson et al, 1993; PROAP, 1989; Wright, 2000). In Pakistan, multigrade teaching is found in rural, sparsely populated areas where the number of students does not warrant the posting of one teacher for one grade (Veryamani, PROAP, 1989). In Indonesia, it is located in small communities with less than 100 children of school-age (Hadisoebroto and Mihing, PROAP, 1989). In the Maldives, multigrade schools are located in distant, widely dispersed and remote islands (Hakeem, PROAP, 1989). In Malaysia, multigrade schools are very far from urban centres (Sulaiman, PROAP, 1989). In Mexico and Peru, multigrade schools are located in the most isolated countryside (Hargreaves et al, 2001; Tatto, 1999a). In Thailand, multigrade schools are

located in remote mountainous areas and various small islands off the southern coast (Yeerong, PROAP, 1989). In Zambia, multigrade schools are located in rural, sparsely populated communities (Little, 1995). In Bangladesh, they are located not only in isolated and sparsely populated areas, but also in heavily populated, but inaccessible rural areas where insufficient teachers are available (Latif, PROAP, 1989).

### 2.3.2 Disadvantaged communities

Communities in the areas where multigrade schools are located are often very poor (Hargreaves et al, 2001; Tatto, 1999a). In India, multigrade schools are found in tribal areas where most people are poor and illiterate (Goyal, PROAP, 1989). In Korea, multigrade schools are located in remote areas where people make a living out of agriculture (Yung, PROAP, 1989). In the Maldives, multigrade schools are found in areas where the socio-economic condition is poor on remote, small islands (Hakeem, PROAP, 1989). In Nepal, multigrade schools are found in areas where people are engaged in agricultural and allied activities, and incomes are low (Basnyat, PROAP, 1989). In Peru, multigrade schools exist where the families of the students are poor (Hargreaves et al, 2001). In the Philippines, multigrade schools are located in sparsely populated areas with sub-marginal economic status, dominated by farmers, fishermen and forest product gatherers (Aoki, 1998; Miguel and Basarga, 1997; Peralta, PROAP, 1989).

In some countries, multigrade schools are found in socially disadvantaged communities such as communities of plantation labourers. In Malaysia, multigrade schools are located in traditional Malay fishing villages, Tamil rubber estates; there are also aboriginal schools (Sulaiman, PROAP, 1989). In Sri Lanka, multigrade schools are often found in the form of Tamil-language schools in tea plantation areas (Little, 1995; PROAP, 1982).

Other disadvantaged communities are those of indigenous minorities. In Mexico and Peru, multigrade schools are located in communities of predominantly indigenous populations (Hargreaves et al, 2001; Tatto, 1999a). In Peru, one-teacher schools are predominantly located in the Andean and Amazon regions where cultural and linguistic diversity is found (Little, 1995). In Pakistan, multigrade schools are often found in minority ethnic and linguistic areas (Rowley, 1992). In India, multigrade schools are sometimes encountered with

disadvantaged minority language groups (Goyal, PROAP, 1989; PROAP, 1982). In Vietnam, children in multigrade schools live in ethnic minority areas (Hargreaves et al, 2001).

Consequently, linguistic issues are part of the multigrade school problem. In Thailand, children in multigrade schools do not always speak the dominant regional language (Yeerong, PROAP, 1989). The Philippines also have a problem of minority language groups in multigrade teaching (PROAP, 1982). Bangladesh, too, has linguistic problems which diminish the quality of teaching (Latif, PROAP, 1989).

### 2.3.3 Physical conditions of multigrade schools

Because of their remoteness, multigrade schools tend to be disadvantaged as far as their facilities are concerned. Many studies on school conditions show that physical facilities and teaching material are inadequate. In Bangladesh, Nepal, Sri Lanka, and Uganda, physical facilities in multigrade schools are inadequate (Basnyat, PROAP, 1989; Latif, PROAP, 1989; Little, 1995; Odyek-Ocen, 2000). In Korea and Vietnam, facilities and material are insufficient (Hargreaves et al, 2001; Yung, PROAP, 1989). In Peru, lack of resources and poor equipment are a significant feature (Little, 1995). In Korea, too, there is a shortage of financial support and assistance (Yung, PROAP, 1989). In the Philippines, multigrade schools are characterised by small classrooms, inadequate facilities, lack of material, the distance between teacher residence and the school and absence of order in the locality (Aoki, 1998; Miguel and Basarga, 1997; Peralta, PROAP, 1989). In Thailand, there is a lack of material. Learning activities do not relate to the local needs. The curriculum is not relevant to multigrade teaching (Yeerong, PROAP, 1989).

### 2.3.4 General characteristics of teachers in multigrade schools

Under conditions outlined above recruitment of trained or qualified teacher is difficult. In Sri Lanka, problems of access, the scarcity of the population and living conditions for teachers make postings in remote rural areas unattractive (Little, 1995; PROAP, 1982). In Thailand, incentives for multigrade teachers are low (Yeerong, PROAP, 1989). As a result, the quality of teachers in multigrade schools tends to be low. In India, too, multigrade teachers are problematic, their irregularity, ill planning, non-accountability and engagement in non-

academic pursuits make for a low school profile (Goyal, PROAP, 1989). In Korea, teaching is ineffective in multigrade schools. Teachers do not prepare enough for their classes (Yung, PROAP, 1989). In Nepal, trained teachers cannot be found for remote areas. Sport activities are not organised in multigrade schools (Basnyat, PROAP, 1989). In the Philippines, teachers lack teaching skills, effective teaching methods, sufficient classroom management, efficient scheduling of class time and activities, and time for remedial teaching. Some teachers cannot master the subject matter for all grade levels (Aoki, 1998; Miguel and Basarga, 1997; Peralta, PROAP, 1989). In Peru, the lowest qualified teachers are assigned to multigrade schools (Little, 1995). These lowest qualified young teachers, who have to travel regularly, are also busy with domestic duties and their motivation is very low (Hargreaves et al, 2001; Little, 1995). In Thailand, teachers lack experience and supervision (Yeerong, PROAP, 1989). In Vietnam, teachers do not have standard education, with only seven years of schooling or less in remote areas (Hargreaves et al, 2001).

In Belize, teachers in many multigrade schools are often untrained (Wright, 2000). The 1993 multigrade teaching study shows that less than one third of multigrade teachers are fully trained. Consequently the scores of selected multigrade students were within the lowest third of the country's schools (Nielson et al, 1993). Teachers in monograde schools have higher education, better education in any case than those of multigrade schools. In a study by Rowley, 70% of multigrade teachers had education not reaching up to grades 9 or 10, and only 9% had graduated from university. In comparison only 57% of monograde teachers had education not reaching up to grades 9 and 10, and 19% graduated from university (Rowley, 1992).

### 2.3.5 General reputation of multigrade teaching

Difficulties caused by remoteness, including inaccessibility, socio-economic disadvantages and low-qualified teachers, account for the fact that the quality of teaching remains low in multigrade schools. In Uganda, small schools are attended by the poorest children and have inexperienced teachers. This means that high retention and dropout rates are observed in those schools (Odyek-Ocen, 2000). In India, the enrolment ratio is low and dropout is high; especially for girls in multigrade schools (Goyal, PROAP, 1989).

## 2.4 Literature on practice in multigrade classrooms

### 2.4.1 Combination of grades

The combination of grades varies across countries. In the Philippines, factors such as enrolment and the number of teachers and classrooms available in each school, determine the grouping. Sample schools studied included combinations of Grades 1, 2 and 3, 4 and 5, 1 and 2, and also 3 and 4 (Lally, 1995). In Vietnam, the mixture of grades varies according to the number of children in each grade, geographical features and the availability of teachers (Lally, 1995). In Belize, most multigrade schools combine classes by division: lower (infants), middle (Grades 1 to 3), and upper (Grades 4 to 6). The precise combination depends on the number of teachers available, as well as their experience and academic qualifications (Nielson et al, 1993). In Mongolia, combinations of classes are organised according to the nomadic life mode of people, i.e. taking into account seasonal movements (Lally, 1995).

In China, class organisation varies, but usually the combined grades are close to each other. Similarly in Papua New Guinea, class organisation varies according to circumstances, but usually Grades 1 and 2, 3 and 4, 5 and 6, 7 and 8 are combined. They are placed in the same classroom. In Laos, 12 % of all sampled classes combine Grades 1 and 2, 4% combine Grades 2 and 3, 2.5% Grades 1, 2 and 3, 2% combine Grades 3 and 4, and 1% has Grades 4 and 5 (Lally, 1995). In Peru, multigrade teachers often divide the students into two groups. The first group, Grades 1 and 2, comprises the monolingual mother tongue students. The second, Grades 3 to 6, includes students with at least some understanding of Spanish (Little, 1995).

### 2.4.2 One-room and separate rooms

In many countries, students of several grades are seated in one classroom. One teacher teaches two or more grades in the same classroom in China, Korea, Malaysia, Pakistan, Papua New Guinea, and the Philippines (Lally, 1995; Miguel and Basarga, 1997; PROAP, 1989). In Bangladesh, multigrade schools have one or two classrooms and one or two teachers for five grades (Latif, PROAP, 1989). In Vietnam, students of several grades are

seated in one room (Birch and Lally, 1995). In Belize, about one half of 70 sampled schools with multigrade teaching were small one-room schools (Nielson et al, 1993). In the Philippines, one male teacher has the responsibility for 28 students from Grades 1 to 4, kept in one classroom in Barangay Quinapon-an (Miguel and Basarga, 1997). In Colombia, the Escuela La Insula primary school in Manizales has one classroom and one teacher for 32 students from Grades 1 to 5 (field note of the author in September 2001). In Mexico, students of Grades 1 and 2 are seated in one classroom in a multigrade school (Tatto, 1999a). In Bolivia, kindergarten, as well as Grades 1 and 2 are seated in one classroom and the other classroom is used for Grades 3, 4 and 5 in the Simon Bolivar primary school (field note of the author in September 2001). On the other hand, in Nepal, several grades are sometimes seated individually in separate rooms (CERID, 1988).

### 2.4.3 Classroom environment

In the Philippines, in a multigrade school in Barangay Quinapon-an, there are two rooms with small chairs, tables, blackboards and teacher's table and chair (Miguel and Basarga, 1997) In Colombia, Escuela La Insula primary school in Manizales, there is one relatively large classroom with seven groups of hexagon tables. The grouping is basically grade-wise but some students sit in a different grade-group according to the students' level (field note of the author in September 2001). In a Mexican rural one-room multigrade classroom, catering for Grades 1 to 3, students of Grades 1 and 2 are seated at tables facing each other. Grade 3 is seated at traditional desks facing the blackboard. The blackboard is divided into three sections drawn by the teacher (Tatto, 1999a). In Simon Bolivar primary school in Bolivia, there are several tables with 3 to 5 students at each table. The children are generally divided into groups by grade level, but some faster learners among students in the lower grades are in the same room with the higher grades. Similarly, class furniture in San Jose primary school in La Paz, Bolivia is benches and long desks in rows facing the blackboard. The blackboard is divided into three sections drawn by the teacher (field note of the author in September 2001). In the eight sampled primary schools of Nepal, long benches and desks were arranged in rows facing the teacher and the blackboard (CERID, 1988).

### 2.4.4 Class organisation

According to Lally (1995) and Little (2001), there are mainly two types of class organisation for multigrade teaching: whole-class teaching and grade-wise teaching. Especially subjects such as music, physical education, arts and outdoor activities are often taught across different grades for a whole class. Other subjects are taught to each grade separately.

In Zambia, there are three types of classroom organisation. First there is a 'subject grouping option.' Subjects such as music, arts, religion and social studies are taught to all grades together at the same time. Second is a 'common timetable option.' Although all children study the same subject during a lesson period, each grade here does its own work separately. Third is the 'subject stagger option.' The subjects in the timetable which require high teacher-student contact are staggered with those requiring little. Each grade separately studies different subjects in the same period (Lungwangwa, 1989). The first option represents whole-class teaching, and the other two are examples of separate teaching.

In the Philippines, three strategies can be identified. First, skill subjects including English, Filipino, and mathematics are taught separately for each grade, while arts and music are taught to the whole class. Second, skill subjects are taught by ability group, irrespective of grade level. Third, basic skills are taught to the whole class, with students splitting into ability groups for extension skills (Miguel and Basarga, 1997). In Bolivia, traditional culture, folkdance, and folksongs are taught together to all grades in the two schools visited. Other subjects are taught to different grades separately. The same subjects are taught to the grades in the same room, but different activities and tasks are given. (field note of the author in September 2001).

In Thailand, children are divided into classes according to their level of education and they are taught separately. Sometimes classes are joined into one group and taught the same subject. For some activities the children are divided into small groups according to their abilities and study (Yeerong, PROAP, 1989). In Belize, many teachers tend to keep grades separate when teaching mathematics and languages, but combine them for subjects like science and social studies (Nielson et al, 1993). In Vietnam, physical education is organised for a whole class in the school visited (Aikman and Pridmore, 2001).

### 2.4.5 Direct teaching in one class and assigned tasks for another class

When children across different grades are taught separately, face-to-face teaching and self-learning are often alternated (Lally, 1995). The teacher spends most time with one grade during a lesson period, while others work on assigned self-learning tasks or are taught by the leader of the grade. Many countries follow this method.

In the Philippines, while the teacher works with one grade, the other grades do self-directed activities (Birch and Lally, 1995). In Belize, teachers give direct instruction to one group, while the other groups are given work using the support of special resources, such as peer and cross-age tutors, teacher-made aids or learning centres for mathematics and language teaching (Nielson et al, 1993; Wright, 2000). Approximately 54% of teachers in multigrade schools make use of peer tutoring to assist them in teaching (Wright, 2000).

In Pakistan, multigrade teachers keep some grades occupied with assigned learning tasks, while they attend to another grade which is taught directly. Sometimes monitors are appointed to keep students focussed on their tasks. Two hundreds and thirty-three out of 271 multigrade teachers, or indeed 85.98% of multigrade teachers, assign self-learning tasks to grades, while they are absent from the classroom (Rowley, 1992).

In Nepal, there are three types of multigrade teaching in the eight primary schools studied. First, the teachers give assignments, mostly exercises from the textbook, to one grade. While the first group works on these exercises the teachers teach the other grade, and vice versa. Second, the teachers occupy separately all grades with exercises from the textbook, the teachers help with the exercises. Third, the teacher teaches each grade in turn. While the teacher attends to one grade, the other two grades are run under the supervision of a monitor or class leader (CERID, 1988). In Peru, in a primary school of the Arakmbut community in the Amazon region, the teacher first forms groups out of students from Grades 3 and 4 and gives them instruction on the blackboard on what they have to do. The teacher leaves students to copy the instructions to their notebooks. The teacher then turns her attention to Grades 5 and 6 (Aikman, 1994).

In a school belonging to a UNICEF project in southern Vietnam, after a period the whole two-grade class spends singing and playing a game, the trained teacher gives separate

instructions to two grades. In Grade 3, all students are working on a mathematics exercise with their workbooks. Before the teacher moves on to Grade 4, he assigns tasks – two exercises – and tells one student to read out the instructions. Then the teacher goes to Grade 4 for a Vietnamese lesson. At the end, the whole class sings a song together (Thanh et al., 2000).

### 2.4.6 Managing all grades simultaneously with frequent short visits

Observations reveal frequent movement of the teacher in the multigrade classroom. Some teachers manage all their grades separately, with frequent short visits during one lesson period. In a Mexican rural one-room multigrade class, the teacher lectures for a short time, then instructs children what to do. The teacher constantly moves from one group to the next, thus making lots of visits to each grade during the one-hour lesson (Tatto, 1999a). In two schools of a UNICEF project in northern Vietnam, during one lesson, the teacher moves frequently between the grades, providing support and monitoring the learning activities of the students. The teacher alternates between the grades while the students complete work on the blackboard or tasks taken from the textbook. In Pa Noc School in Son La province, during the second period, the teacher makes three visits in Grade 2 and two in Grade 3 (Aikman and Pridmore, 2001). In a school in southern Vietnam, without support from the UNICEF project, a teacher who is responsible for two grades visits each grade three times (Thanh et al., 2000).

### 2.4.7 Teaching activities

In a 'New School' in Colombia, the teacher plays the role of a facilitator or tutor rather than that of an instructor. Students work individually and actively with self-learning material and are merely assisted by the teacher. Following three levels of instructions – graded by difficulty – in the self-learning material, two or three children at the same table work together at their own pace.[12] When all children of the one group have finished copying the instructions, they follow the instruction. For example, if the instruction says a topic has been done with the teacher, the children call their teacher and work with him. If the task requires

[12] There are three types of instructions for one unit. Section A is for basic knowledge, section B is for exercises based on the basic knowledge obtained in section A. Section C constitutes the final stage of the unit with further applications. All instructions have illustration of either a teacher, two children or several children to indicate whether the work should be done with the teacher, in pairs or in a group.

experiments with specific material, they go to the resource corner to pick up the material and follow the instruction. The assistance of the teacher is only needed when the instruction indicates it. There is a large, long blackboard in the classroom, but it is not used for the lessons (field note of the author in September 2001). In Indonesia, IMPACT self-instructional modules for two subjects have been introduced. Initially the best students of Grades 5 and 6 tutor lower grade students. Later on all students are required to take their turn at tutoring. At a final stage, the self-learning approach is replaced by peer-group (Cummings, 1986).

However, most teaching methods are more traditional and utilise the same techniques as in monograde teaching. In the Philippines for example, in Tanglad primary school and Maabay primary school on Guimaras Island, the teachers do not encourage the initiative of the multigrade students – as they should have learnt during training in the UNICEF schools which have been studied. In the schools visited, the self-learning material was not distributed to the students, but put on the shelves in the library (Aoki, 1998). In Vietnam, the teacher lectures, and children are not encouraged to show initiative (Hargreaves et al, 2001). For example, in a school belonging to a UNICEF project in southern Vietnam, in Grade 4 for a Vietnamese lesson, the teacher reads a new text passage, for demonstration. Then all students are told to read aloud the passage. The teacher explains difficult words, writing them on the blackboard, and students practice reading the words. All students in turn are asked to read the words aloud. The teacher summarises the main ideas of the text (Thanh et al., 2000). In two schools of a UNICEF project in northern Vietnam, much time is spent in copying from the blackboard. The tasks are often short and easy. When work is completed students do nothing until the teacher becomes available again to provide them with further instructions and work (Aikman and Pridmore, 2001).

In Peru, much time is spent with the teacher dictating and children copying notes from the blackboard. The blackboard is the principal pedagogical resource used, and is often divided into sections corresponding to the grades. The teachers make little use of examples associated with learning in situations outside school. Self-instruction, guided learning and peer-tutoring are not encouraged (Hargreaves et al, 2001). In Sri Lanka, the most common activities are copying from a student reading out text, or from the blackboard, also completion of exercises from the workbook or textbook (Hargreaves et al, 2001). In a school

on a tea estate, for example, the teacher gives one grade instructions to copy exercises from the blackboard. The students of the other grade are set language work. One student reads out one or two words from the book, and the others repeat all together (Ratnaike, 1987).

## 2.5 Literature on problems relating to the classroom practice of multigrade teaching

### 2.5.1 Negative perceptions of multigrade teaching

'Will' with regard to multigrade teaching often determines successful implementation (Benveniste and McEwan, 2000).[13] However, multigrade teaching is often perceived negatively, and is generally viewed as a second-rate low-quality temporary measure which should be avoided (Lally, 1995). Since all systems of formal education differentiate students by age and grade, monograde systems are generally considered to be the ideal model (Little, 2001). In the Maldives, many teachers, administrators and communities regard multigrade teaching as inferior to monograde teaching (Hakeem, PROAP, 1989). In Nepal, none of the teachers in the eight schools included in a case study were found to be in favour of multigrade teaching. Hence they were not motivated to try innovative models or to acquire knowledge of new models of multigrade teaching (CERID, 1988). In the Philippines, in a survey in 1988, 287 multigrade teachers were asked if they would continue multigrade teaching if they had a choice. Eighty-four percent of the teachers answered with 'No' (Miguel and Basarga, 1997).

There are five reasons why there is such a negative perception of multigrade teaching among teachers. First, teachers are unwilling to work in remote areas (Benveniste and McEwan, 2000). In Belize, trained teachers do not choose to work for multigrade schools because many of them are in very remote areas (Wright, 2000). In Sri Lanka, teachers are simply unwilling to serve in remote areas (Hargreaves et al, 2001). In Bangladesh, teachers have little interest in serving in isolated rural areas, because of inaccessibility, problems of communication, inadequate physical facilities, and linguistic problems (Latif, PROAP, 1989). In the studies cited, the problem of multigrade teaching is rather with the location of

[13] According to Benveniste and McEwan (2000), 'will' refers to 'the motivation and commitment of micro-level actors.'

the schools than with multigrade teaching itself. Teachers are unwilling to work even for monograde schools in remote areas.

Second, multigrade teaching requires more work than monograde teaching (Benveniste and McEwan, 2000). In the Maldives, multigrade teachers are overburdened (Hakeem, PROAP, 1989). In Pakistan, the heavy work burden on teachers is a problem (Veryamani, PROAP, 1989). In the Philippines, multigrade teaching requires more work, more preparation, more responsibilities and more effort (Miguel and Basarga, 1997). In a school case study in Zambia, teachers expressed concern about the lack of resources, and also the workload, in the Mwape primary school. Three teachers in Kalombe primary school also felt that multigrade teaching is leading to too great a workload for the teachers (Little, 1995).

Third, multigrade teaching is more difficult than monograde teaching. In Nepal, the 1988 study identifies the difficulties of multigrade teaching as: (1) teaching two or more classes simultaneously; (2) evaluating student progress in multigrade classes, (3) maintaining student discipline in multigrade classes, and finally (4) the importance of administrative work, due to lack of human resources (CERID, 1988). In the Philippines, it is seen as difficult to allocate time for several grades, thus the quality of teaching is low. As a result, students cannot learn successfully and their class performance is low. Teacher accommodation is too far away from the school, and a headmaster has not time to devote to a multigrade school (Miguel and Basarga, 1997).

Fourth, a heavy workload and other difficulties would necessitate special support. This support, however, is hardly available. In Indonesia, most teachers avoid assignments to multigrade schools because training for the special techniques of multigrade teaching is not available, a special curriculum does not exist, the infrastructure is not suitable for multigrade teaching and self-study material and audio-visual aids are lacking (Hadisoebroto and Mihing, PROAP, 1989). In Nepal, self-instructional material is not available. Physical facilities are inadequate, including small classrooms and inadequate furniture. There is no co-operation between the schools, the district education administration and the local community (CERID, 1988). In Uganda, teachers are unwilling to take on the demands of preparation for multigrade teaching without the availability of sufficient time, policies, training material and physical facilities (Odyek-Ocen, 2000).

Despite the hard work and its difficulties, there are few incentives for multigrade teaching. In Indonesia, despite the difficulties, salaries for teachers in multigrade schools are the same as in monograde schools (Hadisoebroto and Mihing, PROAP, 1989). In the Philippines, too, payment is the same, although multigrade teaching is more difficult and requires more work (Miguel and Basarga, 1997). Any incentives and encouragement including teacher professional upgrading, regular appropriations for hazard allowance for teachers are hardly available (Aoki, 1998; Miguel and Basarga, 1997; Peralta, PROAP, 1989).

Fifth, conservative attitudes are resistant to models other than the traditional monograde teaching. There is no faith in multigrade teaching as a pedagogy (Benveniste and McEwan, 2000). Hence in Uganda, teachers are unwilling to face hostile and conservative parents concerned about the future of their children. This is also due to teachers' own conservative outlook and their doubts about the success of the multigrade innovation. The suspicious nature of the parents regarding the motives of school authorities has also to be taken into account. Obsession with school examination is another issue (Odyek-Ocen, 2000).

### 2.5.2 Teacher-related constraints and teacher training

We can see that multigrade teaching is very unpopular with many multigrade teachers. On the other hand, there is also a lot of criticism concerning the quality and attitude of multigrade teachers. In Sri Lanka, teachers lack skills in organising multigrade activities and cannot be expected to teach successfully several grades as a whole class (Hargreaves et al, 2001). Lally (1995) argues that multigrade teachers are often not equipped to handle multigrade classes, because of inadequate preparation and the low quality of teacher training. Very few teachers – and sometimes none at all – have received appropriate training. As a result the quality of teaching and learning in multigrade classrooms remains low.

In addition to the basic low quality of teachers (see 2.4.4), teacher training for multigrade teaching is often unavailable. In Belize, multigrade teachers have to rely on their own initiative which means that their preparation remains normally deficient (Wright, 2000). In the Maldives, skills related to multigrade teaching are not adequately covered in pre-service and in-service training (Hakeem, PROAP, 1989). Peru does not implement the necessary

teacher training for multigrade teaching. In Sri Lanka, there is a lack of training in multigrade teaching (Hargreaves et al, 2001).

Although Nepal conducts in-service teacher training for multigrade teaching, this does not provide adequate skills for multigrade teaching (Basnyat, PROAP, 1989). In India, inadequate teacher training, i.e. deficiencies in planning and organisation of multigrade teaching, coupled with an urban biased education system, keep the quality of multigrade education low (Goyal, PROAP, 1989). In Zambia, some teachers reported that multigrade training in 1984 was inadequate. They think there is a need for more in-service training in multigrade teaching, and the concept of multigrade teaching should be introduced to all teachers (Little, 1995). Vietnam has also implemented training for multigrade teaching, but many teachers have not taken this specialised training. As a result, their teaching methods remain traditional, and an improvement in students' self-confidence, co-operation, independence and creativity is still far off (Hargreaves et al, 2001).

### 2.5.3 Teaching and learning material

There are two types of material for multigrade teaching. First there is teaching material, including self-learning material. When a teacher teaches two or more grades at the same time, students are often without their teacher. Self-learning material can be useful to increase the time on task of students without their teacher being physically present in the classroom. In fact, a number of countries cite the lack of self-learning material to support learning of students in multigrade teaching as a problem. In Indonesia, self-study material, including audio-visual aids, is not available (Hadisonebroto and Mihing, PROAP, 1989). In Nepal, self-instructional material is not available (CERID, 1988). In the Philippines, self-directed material and material with multi-level exercise is rare and inferior in quality (Peralta, PROAP, 1989).

The second type of material concerns media meant to integrate monograde curriculum and multigrade teaching. Since monograde education is often thought to be the ideal in a formal education system, most countries develop their national curriculum grade-wise. This means multigrade teachers have to teach a monograde curriculum content to their multigrade

students. There is a gap between the monograde curriculum and multigrade classrooms. This gap makes it difficult for multigrade teachers to deal with multigrade classes.

In China, for example, many teachers cannot carry out multigrade teaching well, because textbooks for primary schools only meet the demands of monograde teaching. Suitable material for multigrade teaching is needed (Xiaozhen and Sen, PROAP, 1989). Proposals made for the improvement of multigrade schools in India, re-structure the primary curriculum for use in multigrade teaching (Goyal, PROAP, 1989). In Indonesia, a special curriculum for multigrade teaching is not available (Hadisonebroto and Mihing, PROAP, 1989). In Malaysia, teachers lack the skills in multigrade teaching which would allow them to adjust the curriculum and combine various graded syllabus. They are also unable to prepare teaching aids (Sulaiman, PROAP, 1989). In Sri Lanka, the national primary school curriculum is oriented towards monograde schools (Little, 1995). No reference is made to multigrade teaching in teacher handbooks and teacher training. As a result, teachers in multigrade schools need to modify teaching materials themselves, selecting from the national curriculum which is based on monograde teaching (Hargreaves et al, 2001). In Thailand, the curriculum is not relevant to multigrade teaching (Yeerong, PROAP, 1989).

### 2.5.4 Isolation and supervision

Systematic supervision tends to be inadequate. In Vietnam, working in isolation makes multigrade teaching difficult (Hargreaves et al, 2001). In the Maldives, frequent absenteeism of teachers is a problem in multigrade schools. This is caused partly by inadequate supervision (Hakeem, PROAP, 1989). In Malaysia, teachers are often unsupervised and they feel lonely (Sulaiman, PROAP, 1989). In the Philippines, teachers are not encouraged by higher-echelon authorities to try out new ideas (Peralta, PROAP, 1989). In Sri Lanka, supervisors tend to visit schools infrequently. Local supervisors lack the professional ability to advise and guide teachers in the day-to-day matters of multigrade teaching. Moreover, the headmasters of multigrade schools often lack the ability to provide firm guidance for teachers (Hargreaves et al, 2001).

## 2.6 Conclusion

### 2.6.1 Policies and strategies: the international context

As far as policies and strategies for multigrade teaching concerned, there are three types of countries. Based on an analysis of their policies and strategies for multigrade teachers, countries may be categorised into three types (Table 2-4).

Table 2-4 Typology of countries in relation to multigrade teaching

| types | policies | strategies | approaches | characteristics | examples |
|---|---|---|---|---|---|
| 1 | √ | √ | Innovative projects with combined strategies | legislation background theory | Colombia, Indonesia, Philippines, Vietnam, Uganda |
| 2 | | √ | temporary measures and single strategies | 'first-aid' patching temporary measure | Belize, China, India, Nepal |
| 3 | | | no action | no attention towards multigrade teaching no realisation of its significance | Mexico, Peru, Pakistan, Sri Lanka, Thailand |

First, countries like Colombia with policies and strategies for multigrade teaching, where multigrade teaching is conceived as an innovation, designed to improve rural education, and where multigrade teaching exists in its own right. Accordingly, the implementation of programmes is assured by policy statements. In this context, multigrade teaching is considered a pedagogical strategy to improve access to and the quality of rural education. Special projects enshrined in legalisation are often systematically implemented using combined inter-related strategies.

Second, countries like Nepal implementing some strategies for multigrade teaching without formal policies on multigrade teaching. Here, multigrade teaching is considered a problem which impedes the development of quality education in rural areas. The existence of multigrade schools is not a planned phenomenon which means that there is no policy on multigrade teaching or multigrade schools. These countries implement however some strategies for multigrade teaching, meant as a temporary link between the intended monograde schools and the existence of multigrade schools. In this context, multigrade teaching is considered a temporary measure, a compromise between the intentions of the nations and the reality of multigrade schools.

Third, countries like Mexico with neither policies nor strategies in existence, despite the frequency of multigrade teaching. These countries have not yet recognised the significance of multigrade teaching in relation to the improvement of rural education. Therefore no action is taken in relation to multigrade teaching.

The different features of the policies and strategies for multigrade teaching are not related to the prevalence of multigrade teaching. As Table 2-5 shows, also countries without such policies may have a high frequency of multigrade teaching. For example, the occurrence of multigrade teaching in countries like Peru (78%) and Sri Lanka (63%), which have no policies or strategies, is higher than in some countries with such policies and strategies, e. g. the Philippines (5%) or Vietnam (17%). This indicates that decision making concerning policies and strategies does not depend on the reality of multigrade teaching. As previous studies have concluded (cf. Chapter One), educational officers tend to show apathy, and have negative perceptions about multigrade teaching. Therefore decisions do not systematically follow the relevant features. The literature reviewed in this chapter suggests that policies and strategies for multigrade teaching may not reflect the reality. However, for effective educational management, policies and strategies, as well as practice, need to be linked.

Table 2-5 Relations between different types of policies and strategies and prevalence of multigrade teaching

| types in relation to policies/strategies | country examples | frequency of multigrade teaching |
|---|---|---|
| 1 | Indonesia | 20,000 schools |
| | Philippines | 5% |
| | Vietnam | 17% |
| 2 | Belize | 35.27% |
| | China | 12.12% |
| | India | 62.03% |
| | Nepal | teacher-school ratio 3.8 |
| 3 | Mexico | 22% |
| | Peru | 78% |
| | Pakistan | teacher-school ratio 2.3 |
| | Sri Lanka | 63% |

### 2.6.2 Schools and classrooms: the international context

A lack of policies and strategies which take into account the reality of multigrade teaching is responsible for the diversity in the practice of multigrade teaching. The combination of grades used varies widely across countries, based normally on the conditions in each school and the availability of resources. Facilities for multigrade vary too: In many countries students of several grades are seated in one classroom, but in some cases in Nepal for example, students from different grades are seated in separate classrooms. Equally for multigrade class management there is no uniformity. There are three trends of class organisation (Table 2-6). First, some subjects such as singing, physical education, handcraft and outdoor activities are often taught for all grades together. Second, subjects are taught to different grades separately, with direct teaching in one grade and tasks assigned to the other in the meantime. Third, some teachers manage all grades separately, with frequent short visits during the lesson period.

Table 2-6 Three trends of class organisation

| trends | class organisation | class management | subjects |
|---|---|---|---|
| 1 | a whole class together | direct teaching by teacher | music, sports, arts |
| 2 | each grade separately | one class with direct teaching, the others with assigned tasks | any |
| 3 | each grade separately | frequent short visits to each grade during a period | any |

The lack of policies and strategies causes not only diverse practices, but is also responsible for several problems in the practice of multigrade teaching. The literature outlines several problems characteristic of the multigrade classroom. First, multigrade teaching often has a negative reputation, because it requires extra work without support and incentives. Teachers are often unwilling to teach multigrade classes. Second, multigrade teachers are often not equipped to handle multigrade classes because of the low quality or unavailability of teacher training. Teacher training often does not focus on the needs of multigrade teachers. Third, teaching and learning material for multigrade teaching is not available. The national curriculum is often for monograde schools, and the teachers have to adjust it themselves for the multigrade setting. Also media to bridge the gap between the monograde curriculum and multigrade teaching is rarely available. Fourth, systematic supervision tends to be inadequate and teachers are often isolated.

Irrelevant policy settings and temporary strategies for multigrade teaching cause diversity of practice and a number of problems. This diversity of practice makes difficult to formulate appropriate policies and strategies to improve practice of multigrade teaching. In order to set appropriate policies and strategies, it is necessary to understand the current practice of multigrade teaching. Policies and strategies, as well as practice, should aim for better quality teaching.

# Chapter Three
# The Current Situation, and Strategies for Multigrade Teaching in Primary Schools in Nepal

The literature reviewed in chapter two indicated that Nepal falls into the second category of countries identified, i. e. a country which has a strategy for multigrade teaching, but which lacks specific policies for its implementation (Table 3-1). Nepal does not formulate a clear policy statement which could support multigrade teaching. However, Nepal is currently implementing in-service training as a strategy to improve the quality of multigrade teaching.

Table 3-1 Status of multigrade teaching in Nepal

| | policies | strategies | approaches | characteristics | the strategy implemented |
|---|---|---|---|---|---|
| Nepal | | √ | temporary measure | seen as a 'first-aid,' temporary measure | in-service teacher training |

This chapter focuses on Nepal and explores the current status and the more detailed context of multigrade teaching in primary schools. The first section presents the education system of Nepal. The second section analyses the frequency and the current situation of multigrade teaching. The third section explores the historical background of the grading system and looks at teacher training for multigrade teaching. The fourth section presents a detailed account of in-service teacher training which is currently implemented.

## 3.1 Primary education in Nepal

### 3.1.1 A country profile

Nepal is a small country extending 193 kilometres from north to south and 885 kilometres from east to west. It is located on the southern side of the Himalayas, bordering onto India in the east, west and south and onto China in the north. The country is divided into three geographical regions, defined by their altitude: the Terai, the lowland along the southern side of the country, the snow-capped Himalayan mountains, whose altitude reaches up to 8,848 metres, in the north, and the mid-hills situated between the Terai and the Himalayan region where altitudes range from 610 to 4,877 metres.

The Terai occupies 23% of the nation's territory, the mountain region occupies 35 % and the hill region 42%. In 2001, the population was just over 22 millions. According to the 1991 National Census, about 47% of the total population live in the Terai, 7% in the mountains and 46% in the hills. Although the mountain region covers about one third of the country, only about 2% of it is suitable for cultivation. Because of its geographical and climatic conditions, the mountain region is the most sparsely populated region of the country (HMG, 2001). Table 3-2 summarises the statistics, i. e. that Terai region is the most crowded and the mountain region is the most sparsely populated. The population density per square kilometre in the hill region is closest to the national average.

Table 3-2 Areas and population density per square kilometre in Nepal, by region (1991)

| regions | % of national territory | Population | density per $km^2$ |
|---|---|---|---|
| Nepal | 100% | 100% | 125.64 |
| mountains | 35% | 7% | 25.13 |
| hills | 42% | 46% | 137.6 |
| Tarai | 23% | 47% | 256.74 |

Source: HMG, 2001

Apart from geographical divisions, there are five departments and fourteen zones. For administrative purpose, the country is divided into 75 districts. Sixteen districts are located in the mountain region, 39 districts in the hill region, and 20 districts in the Terai region. Each district is headed by a Chief District Officer. Districts are further divided into a number of Village Development Committees (VDC) and municipalities. There are nine wards in each VDC.

Kathmandu, the nation's capital, is located in Kathmandu valley in the hill region. The valley consists of three districts: Kathmandu, Lalitpur and Bhaktapur districts. The valley is the most urbanised area in the country and has numerous advantages over districts outside the valley. This includes economic and educational conditions.

Nepal is predominantly an agricultural country. However, the range and productivity of crops cultivated in the rugged terrain on the steep slopes in the mountain and hill regions are limited. The physical features dividing the country, pose a major obstacle to the development of transport, prevent the formation of markets and consequently force people to perpetuate

closed, self-supporting economies (JICA, 1993). Thus 90.82% of the population live in rural areas, according to the 1991 Census. The estimated GDP per head in 1999/2000 was US$ 244 (HMG, 2001). About 40% of the population live in absolute poverty (EFA Committee, 2000).

Nepal is a Hindu kingdom and 86.5% of the population are Hindus. 7.8% are Buddhists and 3.5% are Muslims. The census of 1991 lists 60 castes/ethnic groups in the country. The social structure of the population is characterised by two principal divisions. One is a vertical hierarchy between socio-professional and caste groups and the other is a horizontal tribal division between ethnic groups. In 1991 various groups were distributed as follows: Chhetri 16.05%, Brahmin (hill) 12.92%, Magar 7.24%, Tharu 6.46%, Newar 5.63%, Tamang 5.51%, Yadav and Ahir 4.14%, and Gurung 2.43% (percentage of total population, HMG, 2001).

Although Nepalese is the official national language and the mother tongue of half the population, there are many local languages. There are 36 languages officially reported in the census and 70 languages or dialects reported by researchers (Gurung, 1998). The mother tongue of 50% of the total population is Nepalese (1991). It is followed by 12% of Maithali, 7% of Bhojpuri, 5% of Tamang and Tharu, 4% of Newari, 2% of Abadhi, Magar and Ria/Kiranti, 1% of Gurung, Limbu and Urdu (HMG, 2001).

Partly because of the linguistic diversity, the literacy rate in the country remains quite low. According to recent estimate by the MOE, 48% of the population of six years and over was literate in 1997 (EFA Committee, 2000). Moreover, and probably affected by Hindu tradition, there is a significant gender difference in the figures. Of the total literate population in 1991 (39.6%), the literacy rate among males was 54.5%, but the rate for females only 25.1% (HMG, 2001).

### 3.1.2 Education system

Nepal's school education system comprises five years of primary education from Grades 1 to 5, three years of lower secondary education from Grades 6 to 8, two years of secondary education from Grades 9 to 10 and two years of higher secondary education in Grades 11 and

12 (MOE, 2000). The official minimum age required to register for Grade 1 is six years, but this is not a rigid requirement (Bajracharya et al., 1998).

There are several types of schools. Primary schools consisting of Grades 1 to 5, lower secondary schools consisting of Grades 1 to 8, secondary schools consisting of Grades 1 to 10 and higher secondary schools consist of Grade 1 to 12. In other words, primary education is not necessarily provided to children only in primary schools. All types of schools include a primary level. In general, all types of secondary schools are located in towns and bigger villages. Small schools in smaller villages tend to be primary schools. The statistics for schools in 1998 were: 17,268 primary schools, 2,993 lower secondary schools, and 3,624 secondary schools (MOES, 2000a).

At the end of Grade 10, the School Leaving Certificate (SLC) examination is held. It comprises seven subjects and takes seven days. The examination of each subject takes three hours. The minimum score required for passing SLC is 32% in each subject. The SLC is regarded as the most important national level examination, providing the entry level for further education. At the same time, having the SLC is a minimum requirement for being a primary school teacher.

After passing SLC, there are three kinds of higher secondary education. Since 1992, secondary schools have extended their education to Grades 11 and 12, providing general schooling after SLC. Alternatively, or more traditionally, universities offer two-year Intermediate Certificate courses in Science, Commerce, Humanities and Education. For those who choose vocational education, there are nine trade schools, technical schools affiliated to the Council for Technical Education and Vocational Training and 118 private technical training institutes (Bajracharya et al., 1998).

Higher education starts with the three-year Bachelor's degree after Grade 12. Exceptionally, technical departments such as Engineering and Medicine offer four-year courses. The two-year course for a Master's degree follows the Bachelor. Universities also offer Ph.D. degrees in most subject areas (Bajracharya et al., 1998). There are five universities with their own and affiliated campuses (MOE, 2000). The oldest university is Tribhuvan University with four affiliated research centres including the Research Centre for Educational Innovation and

Development (CERID) which has been conducting a significant amount of educational research in Nepal.

### 3.1.3 The place of primary education in education policies

Since 1956, a series of five-year plans have been produced. In 1986, immediately after the seventh plan (1986-1991) was initiated, the 'Programme for Fulfilment of Basic Needs' (1985-2000) was unveiled. Its objectives were to improve the levels of food, clothing, housing, health, education and public order. This programme reflected the living standard of people in Nepal and set the direction and targets of the eighth plan (1992-1996). The priority of the plan is poverty alleviation, which means that the plan focuses on the intensive development of rural areas where poor people live (JICA, 1993).

On the international level, the World Conference for Education For All (WCEFA) was held in Jomtien in 1990. Since Nepal is one of the signatories to the WCEFA, a National Plan of Action (NPA, 1992-2000) was prepared. The targets of the NPA were incorporated into the eighth five-year plan. The main policy priority of the eighth plan for the education sector was the improvement of literacy and universal primary education (Matsumoto, 1998). The eighth plan has developed a more practicable set of targets for EFA than the NPA, and the targets were revised later for the ninth plan (EFA committee, 2000). Accordingly, two projects, the Basic and Primary Education Project (BPEP) and the Primary Education Development Project (PEDP), meant to support primary education, have been implemented since July 1992 (Bajracharya et al., 1998). Although multigrade teaching is not mentioned in these policy statements, strategies for multigrade teaching have been implemented as part of the key features of the BPEP (MOE, 1999a).

The main policy priorities of the ninth plan for the education sector (1997-2002) consist of eleven points. Primary education remains one of the main priorities: basic and primary education is to be expanded to achieve free and compulsory education throughout the country, measures will be taken to achieve equitable education, ironing out social, ethnic, gender, as well as regional disparities, also provisions are to be made to provide primary education in the different languages of the country (Bajracharya et al., 1998). The national

targets for primary education in the ninth plan are as follows: Net Enrolment Rate (NER) 90% with a cycle completion rate of 70% (EFA committee, 2000).

### 3.1.4 Finance in primary education

Approximately 14% of the national budget has been regularly allocated to education throughout the 1990s. In 1998/99, 12.5% of national budget was allocated to the education sector (MOES, 2000a). The greater part of money spent on education belongs to the regular budget. In 2001/02, the regular budget allocated to education was 21.14% of national budget, with an additional development budget of 6.94% (Ministry of Finance, 2001a). Since most of the regular expenditure is spent on the salaries of teachers, only approximately seven percent of the national budget are after all available for educational development.

One of the significant issues of the financial situation of Nepal is its high dependency on foreign aid. As far as expenditure for development is concerned, only 26.4% came from fiscal revenue in 1999/2000. The rest was 18% foreign grants, 37.2% foreign loans and 18.4% of other deficit (Ministry of Finance, 2001b). Of all the foreign grants and loans received, 3.9% was allocated to education in 2000/01 and 3.4% was committed to be allocated in 2001/02 (unpublished document, Sector-wise Foreign Aid Commitment 2000/01, 2001/02). In other words, about half of development expenditure in education comes from foreign aid.

Within the budget for the education sector, 55% of available funds are allocated to primary education, followed by 24% for secondary education and 18% for higher education (1998/99 figures, MOES, 2000a). Thus primary education is the most significant sub-sector of the education sector. The policies which prioritise primary education are reflected in the allocation of the budget.

Of the total costs for the second phase of the BPEP (US$ 427 million), the government pays 71% and donors cover 34%. However, the government pays only 17.37% of development expenditure, the rest of 82.63% coming from donors (MOE, 1999a). In 2000/01, the government paid 28.53% of development expenditure in the BPEP. For the rest, 59.35%

come from foreign grants and 12.13% from foreign loans (MOES, 2000b). In other words, more than 70% of the development expenditure in the BPEP comes from foreign aid.

Of the total budget for the BPEP in 2000/01, 67.19% is regular expenditure and 30.86% is development expenditure, spent exclusively for the 17 components of the BPEP. About seventy percent of the BPEP budget is spent for teacher salaries. Of the remaining budget, 10.6% is allocated to recurrent training, including Multigrade Teaching Training, 21.4% are used for facilities and 17.8% for the core programme for institutional capacity building (Ibid.). Thus recurrent training receives a significant percentage of the development expenditure of the BPEP.

### 3.1.5 National curriculum of primary education

The curriculum is structured grade-wise. The curriculum was reformed and the textbooks were revised under the BPEP. A new curriculum for Grade 1 was implemented in 1992. Other grades followed in subsequent years and the whole curriculum reform for the primary level was completed in 1996. Table 3-3 indicates the subjects taught at the primary level and their curricular weight (MOE, 2000). Nepalese, mathematics, physical education, as well as creative and expressive art are taught in all grades. Social and environment education, including health, is taught from Grades 1 to 3. English, environmental science, as well as health and social studies are taught in Grades 4 and 5. Textbooks for each grade are available for the core subjects, but there is no textbooks for physical education or creative and expressive art.

The teaching language is Nepalese in all public schools of Nepal, but flexible space for optional subjects is available for all grades; this allows for adjustment to local needs including ethnic languages. In practice, this space is often used for optional English teaching for all grades.

There is a significant share of private schools which are generally well perceived. This is due mainly to reasons of the teaching language. Nineteen percent of primary schools were private in 1998 (PROAP, 1998). Although private school teachers do not receive teacher training by the government, private schools have, in general, a better reputation. In private schools the

most commonly used teaching language is English. This English language policy of private schools influences the selection of optional subjects in public schools.

Table 3-3 Curriculum structure at primary level, by subject (hours/week)


Source: MOE, 2000

Assessment for students is conducted by the school in the middle and at the end of each trimester. Until 1999/2000 district level examinations had been conducted at the end of Grade 5, but they have since been abandoned. Now achievement tests are carried out by individual schools. Promotion to the next grade is determined by this test score.

### 3.1.6 Primary school teachers

Table 3-4 Primary teacher qualification, by region (% in 1998)


Source: MOES, 2000a

The minimum requirement for recruitment as a qualified primary school teacher is to have passed the SLC. There is no teaching license system. Table 3-4 shows that the majority of primary school teachers in all regions are qualified. Although more than 50% of teachers have qualifications above SLC in Kathmandu valley, approximately 75% of teachers in the hill region hold only SLC. Some of Intermediate Certificates, BA and MA holders have

studied education, but statistics for them are not available. Some teachers are trained on the job, but it is difficult to ascertain what kind and what length of training they receive. In general, many teachers acquire knowledge of their subjects, but they are not aware of pedagogical and instructional knowledge. Additionally, the government states that each school has to have at least one female teacher, but female teacher ratio in Nepalese schools in 1998 was 0.9 per school (MOES, 2000a).

### 3.1.7 School cluster systems

In each of the 75 districts, there is an District Education Office. The office is headed by the District Education Officer (DEO). Each district is divided into supervision blocks. In each block, there is a Resource Centre (RC) at a core school. All schools are clustered round the RCs on the basis of school population and geographical locations. In each RC, either a School Supervisor or a Resource Person is present. The School Supervisor is a regular position appointed by the MOE and the Resource Person is a temporary, contracted local teacher appointed by the DEO.

## 3.2 Multigrade teaching in primary schools

### 3.2.1 Frequency of multigrade teaching

Nepal does not systematically collect information on multigrade teaching. Therefore, information on the exact frequency of multigrade schools is not available. In a speech in 1989, a Joint Secretary of the MOE announced that approximately 60% of schools in Nepal required multigrade teaching (CERID, 1989a). However, no supporting evidence was provided.

Based on the teacher-school ratio, multigrade teaching seems to be prevalent. The national primary school teachers to school ratio in Nepal is 3.8 (in 1998, MOES, 2000a). This means that on average 3.8 teachers are responsible for Grades 1 to 5. However, the real figure seems to be lower than this. As Table 3-5 shows, the ratio in Kathmandu valley is 6.4, and the ratios for the mountain and hill areas are lower than the national average. In other words, all regions of Nepal except the Kathmandu valley have a number of teachers lower than the

number of grades. Considering that only 5.98% of primary schools are located in the Kathmandu valley, most of the country is afflicted by a shortage of primary school teachers.

Table 3-5 Primary school teacher to school ratios in Nepal, by region (1998)


Source: MOES, 2000a

Moreover, Table 3-5 indicates that the teacher-school ratio in rural areas is slightly lower than the national average. The total number of primary schools includes secondary schools with a primary level and urban schools. The primary school teacher to school ratio in urban areas is 5.3, 4.6 in the mountain region, 4.8 in the hill region, and 6.8 in the Terai region. Urban schools have, relatively speaking, enough teachers for the primary grades. However, the percentage of urban schools is very low. Only less than 10% of all primary schools are located in urban areas. Thus only a limited number of schools have enough teachers for all primary grades.

This has implications for the location of multigrade teaching. Teacher shortage is found not only in the economically least developed and remote areas (e.g. the Far Western area and the most sparsely populated mountain regions) but in most parts of the country. Table 3-6 indicates that only the Kathmandu valley and the eastern Terai have on average more than five teachers per primary school. Other regions have less than five teachers per school. The lowest ratio is 2.9 in the Central hill region and the Far Western hill region. When looking at the district level, only nine districts out of 75 have on average more than five teachers per primary school. In contrast, 12 districts have less than three teachers per primary school. Only the Kathmandu valley – where only 5.98% of total primary schools are located – and few urban areas, which represent less than 10% of the country, have relatively speaking a sufficient number of teachers for the primary grades. In other words, one teacher for each grade is not available in most parts of Nepal.

Table 3-6 Primary school teacher to school ratios, by department and region (1998)


Source: MOES, 2000a

### 3.2.2 Rapid expansion of primary schools and multigrade teaching

Low enrolment rates were the most significant issue in education in Nepal for the last five decades. Now, because of the political priority for the quantitative expansion of primary school education, there has been a sharp increase in primary school enrolment. The number of schools has increased from 321 schools in 1951 to 8,708 schools in 1975, 17,842 schools in 1990, and 23,885 schools in 1998 (MOEC, 1990; MOES, 2000a, Sellar et al., 1981). As a result, a Gross Enrolment Rate (GER) of less than 1% in 1951 has jumped to 59% in 1975, 80% in 1985, 107% in 1990, 114.1% in 1995 and 123.9% in 1998. This can be broken down to 106.2% for girls and 140.7% for boys. (MOE, 1997; MOEC, 1992; MOES, 2000a; Sellar et al., 1981; PROAP, 1998).

Although schools have been established and more children have been enrolled, the supply of teachers has not matched the rapid increase in the number of schools. The number of teachers has increased dramatically: from 640 teachers in 1951 to 17,728 teachers in 1975, 71,213

teachers in 1990 and 91,878 teachers in 1998 (MOEC, 1992; MOES, 2000a; Sellar et al., 1981). But even so, this increase does not correspond with the required numbers. For example, 119,425 teachers would have been required to allocate one teacher to each grade in 23,885 schools in 1998. However, the actual number of teachers was 91,878. In other words, 27,547 teachers are missing for an allocation of one teacher to each grade. Despite the successful increase in the numbers of both schools and students, the teacher-school ratio has remained at 4.0 between 1989 and 1996 (MOE, 1996, 1997, 1998, 1999b; MOEC, 1990, 1992; MOECSW, 1993, 1994, 1995; MOES, 2000a).

Figure 3-1 Progress in the number of primary schools and teachers[1]

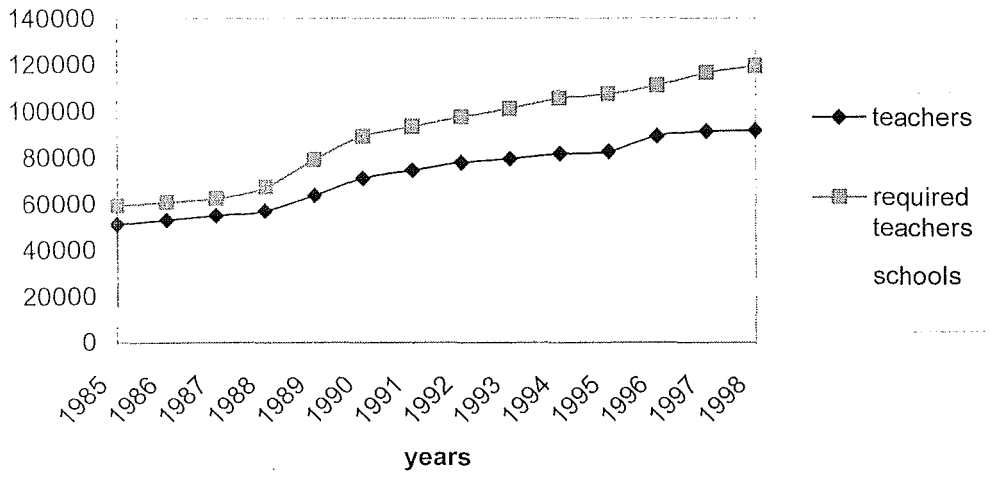



Figure 3-1 indicates the gap between the number of teachers required to allocate one teacher to each grade and the actual number of teachers available between 1985 and 1998. The line graph shows that the gap has widened in the 1990s, compared with the 1980s. In fact, the latest statistics show that the teacher-school ratio is decreasing, from 4.0 in 1996, to 3.9 in 1997 and 3.8 in 1998 (MOE, 1998, 1999b; MOES, 2000a). The BPEP budget for 1999-2004 for physical facilities is US$ 32 million, allocated to the construction of 5,400 new classrooms. On the other hand, during the same project period, positions for additional teachers are to be frozen (MOE, 1999a). In other words, the number of multigrade schools has been increasing and will continue to increase. Even though improved facilities can allow more children to enrol in schools, the number of teachers will remain the same for at least the next five years. Consequently multigrade teaching will be even more in demand.

[1] Required teachers refers to the number of schools times five.

### 3.2.3 Low quality of education and multigrade teaching

With the strong efforts for a quantitative expansion of schools, physical access to primary schools is no longer a problem even in very remote areas. This is shown by school density, the inter-spacing of schools and commuting distance. According to the recent Nepal Living Standard Survey, 97% of urban and 88% of rural households have a school within a commuting distance of 30 minutes (MOE, 1999a).

Now, the issues are concentrated on the quality of education (Bajracharya et al, 1998; EFA Assessment Committee, 2000; HMG and UNICEF, 1997; JICA, 1993; MOE, 1999a; World Bank, 2001). The NER remained at 70.5 % and completion rate of the primary level remained at 53.0% in 1998 (MOES, 2000a). The internal efficiency was as low as 46% in 1995, a problem caused mainly by high repetition and dropout rates (MOE, 1999a). Student learning achievement is low in general (MOE, 1999a). A study on the National Achievement Level of Grade 3 in 1997 indicates that the achievement levels are low in the three core subjects, Nepalese, mathematics and social studies, and that students do not comprehend most of the facts learned (MOE, 1999a). A study on the Learning Achievement Test of Grade 5 in 1999 indicates considerable variation in different areas. The Western and Eastern regions are better than the Mid-Western and Far Western regions, and students in urban areas are better than those in rural areas – this concerns Nepalese and social studies (EFA Assessment Committee, 2000). General weaknesses in mathematics are caused by teacher shortages and the lack of effective teaching methods (JICA, 1993).

Student learning achievement is consistently related to the amount of time available for teaching and learning, it also depends on how this time is used (Lockheed et al., 1991). Students in multigrade schools tend to have less learning time. In Sri Lanka, it is estimated that children in each grade in the multigrade classroom work for only about half as many hours as children in the equivalent grade in a monograde school. In multigrade classes, children have to compete for materials and limited space in the classroom. They receive less of the teacher's time and attention. This implies less reinforcement of what they have learned (Hargreaves et al, 2001). In Malaysia, students are often left on their own in a classroom which the teachers go and teach in other classes (Sulaiman, PROAP, 1989). In Vietnam,

efficient use of time is problematic. The multigrade school day is short, on average 2 to 3 hours per day, with 5 days a week (Hargreaves et al, 2001). Thus time efficiency in multigrade teaching is crucial to improve student achievement.

### 3.2.4 Inequality in disadvantaged populations and multigrade teaching

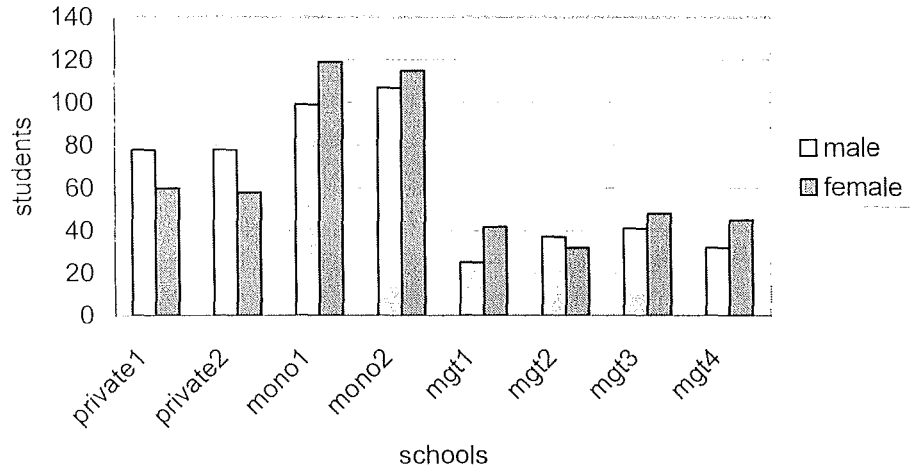
One of the key issues in primary education is the inequality of access to schools and a low participation of disadvantaged populations in various regions and social groups (Bajracharya et al. 1998; EFA Assessment Committee, 2000; HMG and UNICEF, 1997; JICA, 1993; MOE. 1999a; World Bank, 2001). The problems of non-enrolment, dropout and low learning achievement are particularly acute among girls, children from the poorest households and socially disadvantaged communities. Especially inequalities in terms of gender and caste/ethnicity are evident (MOE, 1999a).

Nepalese society shows marked variation by gender, this is especially evident with the Hindu majority. From this follow differences in school attendance between boys and girls. The GER of girls in 1998 was more than 100%, but families still often make decisions in favour of educating sons (Stash and Hannum, 2001). The NER is 70.5 % for all children, but only 61.2% for girls. The completion rate for the primary level in 1998 was 53.0% for all students, but 41.9% for girls (MOES, 2000a). The internal efficiency in 1995 was 46% for all, but only 40% for girls (MOE, 1999a). When parents cannot afford to send all of their children to school, sons are sent to school and daughters remain at home until the family can afford to send them to school, too. As a result, girls tend not to enter school at the adequate age. Even after the registration, daughters tend to be withdrawn from the school when it is necessary.

When parents can afford to send all their children to school, daughters are also allowed to enrol in school. When girls are sent to school with limited resources, they are often sent to the schools nearest to their house in the village. Sons may be sent to private schools which are believed to be better than public schools, but girls are sent to the cheaper local public schools. For example, Figure 3-2 shows the gender gap in student attainment for schools within a VDC in Kavre district. In the VDC, there are two private schools, two monograde schools and four multigrade schools. There is a total of 497 boys and 519 girls who are enrolled in schools. The majority of the children are taken in by large monograde schools.

Boys attend private schools more often than girls. More girls enrol in multigrade schools. Multigrade schools are an alternative for girls who cannot enrol in the larger monograde schools.

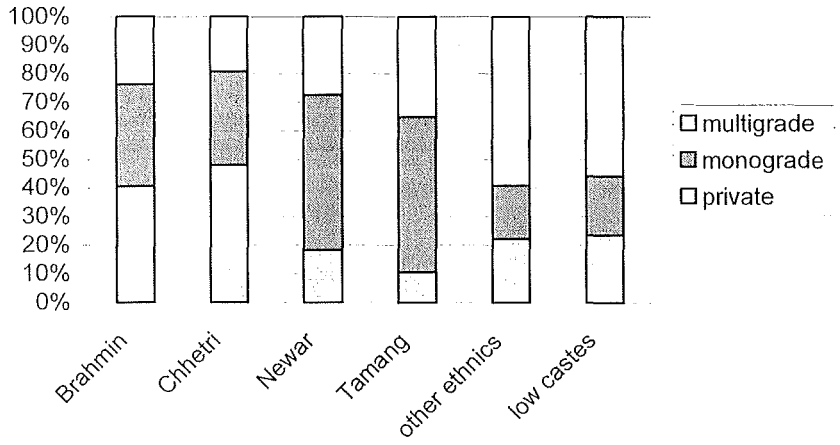
Figure 3-2 Student attainment in 8 schools within a VDC in Kavre district (2001/02)




Caste and ethnic hierarchical systems continue to perpetuate social inequality despite national legislation outlawing caste discrimination (Stash and Hannum, 2001). Urban affluence and access to education reinforce certain castes with superior status, reproduce elites and limit educational opportunities for the others. Only 21 out of 60 caste/ethnic groups are above the national average for primary and secondary school attainment (Gurung, 1998). Hata (2001) concludes that the hierarchy of caste/ethnic groups has a consistent correlation with student learning achievement and student school attainment.

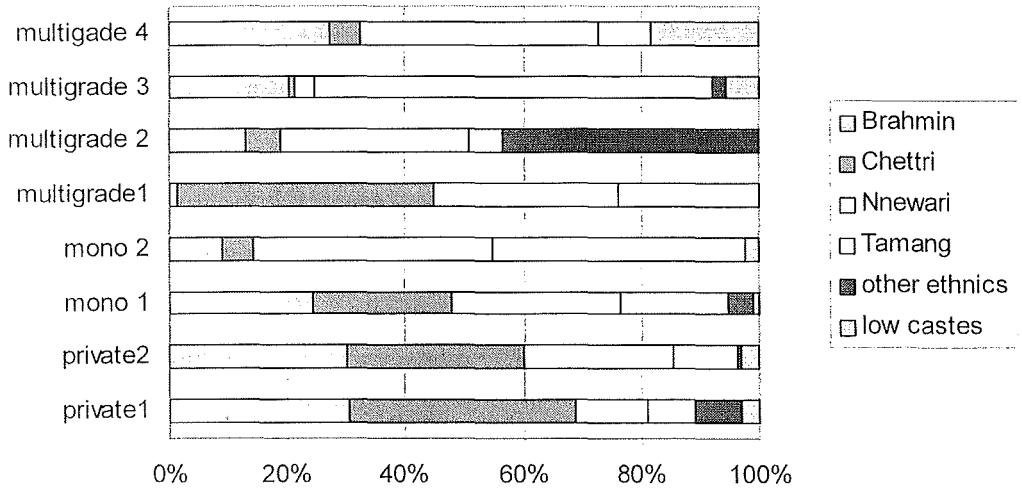
One of the reasons for the low enrolment and high dropout rates of low castes and minorities has been identified as the distance between schools and home in the remote areas where these communities often settle (Sellar et al., 1981). Therefore, small schools have been constructed also for communities in remote areas. These multigrade schools are a measure to incorporate minorities who cannot enrol in larger schools. Figure 3-3 shows that a majority of students from minority ethnic groups and low castes attend multigrade schools, while high castes and the major ethnic groups enrol in monograde and private schools – this data is from a VDC of Kavre district.

Figure 3-3 Caste/ethnic groups and types of schools in a VDC in Kavre district (2001/02)




Furthermore, it has been observed that when the share of one caste/ethnic group declines in a school with various groups, dropout rates of this group increase (Hata, 2001). Low caste and minority dropout happens mostly at primary school level (Hata, 2001). Figure 3-4 shows that the percentage of low castes and minorities is high in multigrade schools. However the potential for dropout of low castes and minorities in multigrade schools is lower than in larger schools. Therefore, quality in primary multigrade schools is crucial for improving the conditions of education for low castes and minorities.

Figure 3-4 Student distribution of 8 schools in a VDC in Kavre district (2001/02)




3.3 History of multigrade teaching in Nepal

As literature review has shown, the government of Nepal is currently implementing in-service teacher training as a strategy to improve multigrade teaching. The following sections focus on this training, analysing the origin of the strategies for multigrade teaching, showing how the current teacher training has emerged, and presenting the details of current training.

### 3.3.1 The inception of a modern graded education system: 1951-1975

Teaching students according to grades was a traditional form of teaching neither in the Bhasha Pathashala (vernacular schools) nor the Gurukul schools which started in 1901 (CERID, 1986a, 1988). Children of different grades were taught in the same class by a single teacher. A British style of modern education with a single point entry, grade-wise and subject-wise teaching, annual promotion and professional teachers was introduced via India to an extremely limited elite from 1854 onwards (CERID, 1986a). However, the ancient schooling forms were not directly compatible with the expansion of a modern education system for a mass population which developed in the early 1950s.

With the inception of a modern education system for a mass population, the grading system was established. After an armed revolt in 1951, the new government recognised the importance of mass education for a modern, unified nation. A National Education Planning Commission was established in 1954 to devise a uniform pattern of education for the nation as a first effort to modernise the national school system. The United States Operations Missions signed the first project agreement with the Ministry of Education (MOE) in March 1954, and its consecutive involvement in educational development in Nepal continued until 1975. During this twenty-year period, Nepal underwent a massive and rapid quantitative expansion of the number of schools, students and teachers. The major components of the education system such as the curriculum, material development, textbook publishing, teacher training facilities and supervision development were established during this period. As the United States was the only major donor during this early period of development of education policies, its influence on the educational systems was significant. Over 300 educators were trained in the United States, and many advisory consultants came from the USA (Sellar et al, 1981). Therefore, American graded types of grouping systems of schooling were imposed as an unified model for the education for a mass population.

When in 1971 the National Education System Plan (NESP) was formulated to clarify the education system, the grade system was not related to learning objectives, curriculum, textbooks, assessment and teacher allocation to schools (MOE, 1971). According to the NESP, primary education was simply identified as the three years from Grades 1 to 3.[2] However, a particular learning objective for each grade was not specified. The school system was divided into three levels and each level had one learning objective. The objective of the primary level was just stated as 'to impart literacy,' but there was no specific target for each grade. The curriculum was also divided into only three levels. The subjects were specified for the three years of the primary level, but no specific targets were mentioned for each grade. There was no specification that textbooks should be edited grade-wise. Assessment regulation was also specified simply for the primary level. The NESP stated that internal assessment should be carried out at the end of each lesson, and final examinations were to be conducted at the end of primary education; serving for the promotion of the students. In the NESP, nothing was specified for each grade individually as far as learning objectives, curriculum and assessment were concerned.

Teacher allocation to schools was never meant to correspond to the number of grades. The NESP did not state in fact that one teacher was to be allocated to each grade. It stated that the average teacher-student ratio should be 1:30 in primary schools (MOE, 1971). This means one teacher would be allocated for 30 students in a school. Thus since the establishment of the education system, allocation of one teacher for one grade was never guaranteed.

Yet, there were two factors which induced teachers to teach grade-wise. First, specification and actuality were different in development of the textbooks. Although the NESP had not specified, in practice the textbooks were developed grade-wise in the mid-1960s (CERID, 1979; Sellar et al., 1981). Two different types of textbooks were developed for each grade. Second, the Plan required each graded class to have a room of its own (MOE, 1971). Therefore, students of each graded class were seated in a separate classroom. It is indeed textbooks and classrooms with which teachers and students are the most directly concerned, because they are the most essential component of teaching and learning activities. Teachers

[2] The first level was defined as primary education (Grades 1 to 3), the second level as lower secondary education (Grades 4 to 7) and the third level as secondary education (Grades 8 to 10).

were encouraged to use monograde teaching by grade-wise textbooks and classrooms, although learning objectives and learning targets in the curriculum and for assessment were not strictly fixed grade-wise.

### 3.3.2 Intention and implementation

Multigrade teaching never obtained the status of a formal component of the education system of Nepal (CERID, 1988). Although monograde teaching was believed to be the ideal teaching model, practice could not easily follow intentions. Multigrade teaching existed from the inception of the modern education system. It was never possible to allocate a teacher to each grade.

The first reason for this being that the number of teachers required increased so rapidly that the number of teacher candidates could never catch up with demand (Sellar et al, 1981). When modern education was introduced, the most urgent mission was quantitative expansion, because in 1951 the percentage of students in education in each relevant age group was only 0.9 %. In order to develop schooling opportunities for children, i. e. to give them an opportunity to be students, a 'something is better than nothing' approach was followed (Sellar et al, 1981). In order to catch up with the demand for teachers, the minimum requirement for being a primary teacher remained the School Leaving Certificate (SLC), obtained after completion of Grade 10 (MOE, 1971). The teachers were not obliged to undergo pre-service training or to have a license in order to be primary school teachers. Although any person who was literate was recruited for teaching, the number of teachers was never sufficient to cover all grades.

Second, funding did not allow the allocation of one teacher for each grade. Since 1971, the salaries of all primary school teachers employed by government are paid from government funds (MOE, 1971). Limited government funds restrict the recruitment of more teachers.

Third, although pre-service and in-service teacher training systems were developed to supply a considerable number of teachers rapidly, a 'built-in career ladder system' in the educational administration offered an opportunity for primary teachers – regardless of their entry level – to move up to better paying secondary school positions. Although the number of trained

teachers increased from 640 in 1951 to 17,728 in 1975, the movement from primary to secondary positions resulted in a continuous shortage of primary school teachers (Sellar et al, 1981).

### 3.3.3 Reality of multigrade schools

Despite the massive expansion of the number of schools, students and teachers, the situation of multigrade teaching did not change. In 1975, 17,728 teachers taught in 8,708 schools. Hence the average number of teachers per school was 2.03. In other words, two teachers had the responsibility for three or five grades in one school. Compared with the figure of 640 teachers for 321 schools in 1951, the teacher-school ratio had not improved at all during these twenty years.

This phenomenon of one teacher in fact teaching two or more grades within a theoretically monograde system was recognised, although the term 'multigrade teaching' was not used. Questions on the practice of multigrade teaching were included in a questionnaire for an impact study of projects conducted in 1980. According to the results of the questionnaire administered to 43 teachers, four teachers replied concerning the situation of multigrade teaching (Sellar et al, 1981: B-23):

> Two respondents assigned one class to chanting or singing while the other was taught; one had erected partitions, and in one case the school building had actually collapsed, with all classes now held outside.

Multigrade schools and teachers did not get much support, but the reality of multigrading was recognised since this early stage of educational development. When the constant teacher shortage was officially recognised, training related to multigrade teaching was proposed in 1973. Tribhuvan University proposed to undertake reforms to its education courses, adopting a semester calendar and a credit system for a one-year primary school teacher training programme (level A-1). The course relevant to multigrade teaching, entitled grade teaching and multigrade teaching, did account for three credits out of a total of 50 credits (Shrestha, 1980). Although this remained only a proposal, it shows that multigrade teaching received some attention since the early period of educational system in Nepal.

### 3.3.4 The emergence of two major projects in support of multigrade teaching in the 1980s

After US American agencies left in 1975, the United Nations began to play a significant role in primary education throughout the 1980s. The most significant projects were the Seti Education for Rural Development Project (SERDP) and the Primary Education Project (PEP).[3]

SERDP was launched at the end of 1981 in five districts of the Seti Zone.[4] This project, meant to develop a system of basic education to promote rural development was implemented from 1982 to 1992 (UNESCO and UNDP, 1994). SERDP developed and introduced models of various education systems which continue to function today. They include two significant components related to multigrade teaching.

One component is a network of cluster systems with the establishment of Resource Centres (RCs) and the creation of the position of a resource persons. The RCs were to provide short-term in-service training facilities for all local training needs and supervisory support for their satellite schools. The position of resource person, responsible for supervision, was created to provide more careful and direct support for schools. In the 1990s, the system of RCs and resource persons was extended over the whole territory by the government, and Multigrade Teaching Training was organised in the RCs by the resource persons.

The second component of SERDP was the refinement of the framework for in-service teacher training. A ten-month training programme was developed and tested in pilot studies. In 1989, the programme was approved to become part of the new certificate level course of Tribhuvan University (Crowley, 1990). A Teacher Training Centre was constructed at the project sites to provide the ten-month training. In the 1990s, nine Primary Teacher Training Centres (PTTCs) were built throughout the country. Supported by the Asian Development Bank (ADB) they are meant to provide the refined programme of ten-month training, including sections of multigrade teaching.

[3] They were developed as pilot projects, later to be expanded to the whole country.
[4] It was supported by UNESCO, UNDP and UNICEF.

SERDP also launched a twenty-one day Basic Primary Teachers Programme and a seven-day refresher course designed to be held at the RCs on the basis of practical field experience.[5] These training models were subsequently adopted by the MOE to provide training for all primary school teachers under the Nepali Basic Needs Programme (BNP), introduced in 1987. The Basic Primary Teacher Programme provided for a limited number of simple teaching methods, the production and the use of lesson plans, the provision of teaching and learning materials from local resources and a number of classroom activities (Crowley, 1990). This training contents did not include multigrade teaching yet.

In 1984, PEP was launched in six districts spread across the country. [6] The project took up the experiences of the SERDP and further tested innovative models, designed to meet the needs of primary school education.

The first step in the direction of multigrade teaching was made in a mid-evaluation study report of the PEP in 1986. PEP ran two pilot models of 12-day in-service teacher training in two districts in 1985 (CERID, 1986b). This training mainly focused on subject matters and introduced grade teaching, but did not include multigrade teaching. The project evaluation study however reported that special attention should be paid to multigrade teaching as one of the components of the training (CERID, 1986b). This recommendation is the first appearance of the term 'multigrade teaching' in an official document.

Meanwhile, a project called Multigrade Teaching in Primary Schools in Nepal was operating with support of UNESCO/ PROAP, collaborating with the PEP throughout 1986 to 1989. The project included the following three components. First, two status studies of multigrade teaching were undertaken by CERID to understand the current situation of multigrade teaching in 1986 and 1988 (CERID, 1986a, 1988). Second, based on these studies, a guidebook and a handbook for multigrade primary school teachers were developed (CERID, 1986a, 1988). Third, national workshops and seminars on multigrade teaching were organised to understand the current situation of multigrade teaching, and to identify difficulties as well as potential innovations which might strengthen multigrade teaching

[5] Training of Trainers (TOT) was used to distribute the programme more widely, handing over the role of trainer from the project staff to the supervisors. Training manuals for every training course, as well as guidelines to trainers were provided to indicate how to best organise the training.
[6] This programme was supported by IDA and UNICEF.

(CERID, 1988, 1989a). During a workshop in October 1988, Dr. Radha Krishna Joshi, co-ordinator of Primary Schools Project, presented a paper describing the then current situation of multigrade teaching as follows (CERID, 1988: Part1-7):

> A majority of primary school teachers are untrained. Even trained teachers are not familiar with the concepts and techniques of multigrade teaching because those concepts and techniques have not been incorporated in the primary teacher education curriculum.

He also pointed out that there was no supervision for the multigrade teaching already operating. According to his paper, there was no specific support for multigrade teachers such as training and supervision until 1988. At the same workshop, Mr. Jaya Ram Giri, Joint Secretary of the MOE, mentioned in a speech that approximately 60% of schools in Nepal required multigrade teaching (CERID, 1989a). The prevalence of multigrade teaching in Nepal was officially recognised for the first time.

Three years after the first recommendations concerning multigrade teaching – based on the workshops and studies mentioned – teacher training for multigrade teaching was experimented. The training was organised in five-day courses, using the training manual developed by PEP in 1989 (CERID, 1989a). The manual aimed at providing basic skills and strategies for multigrade teaching. The training remained at an experimental scale and was not continued during the implementation period of the PEP. However, these experiments were the first steps towards support for multigrade teaching in Nepal and would influence later projects.

### 3.3.5 The Basic and Primary Education Project (BPEP) in the 1990s

There were two significant events which influenced primary school education in Nepal in 1990. First, the king abandoned autocratic rule and multi-party democracy was introduced. This political change encouraged more international agencies to assist Nepal. Second, the Education for All conference was held in Jomtien, promoting a large scope of primary education programmes. In this situation, the Basic and Primary Education Project (BPEP) was initiated in 1992. The project had at its disposal multi-donor funds, and was based on the experience of SERDP and PEP, trying to improve access to, quality and management

efficiency of primary education (MOE, 1999a).[7] For the first time in Nepal, the project specified grade-wise learning objectives for Grades 1 to 5, and produced corresponding grade-wise new textbooks. Multigrade teaching was included in the training curriculum of two types of training.

BPEP1 (1992-1998) provided two types of in-service teacher training to selected primary school teachers. A ten-month primary school teacher training was provided by the National Centre for Educational Development (NCED). Short-term teacher training called 12-day Recurrent Teacher Training was developed by the Primary Teacher Training Unit (PTTU).

The ten-month primary teacher training course, running from 1993 to 1998, consisted of 24 units. Its training curriculum was developed by senior professionals of TU and MOEC, based on SERDP teacher training components as well as other already existing training curricula (NCED, 1995). During the ten-month period, trainees were required to take 24 units or 1,280 hours. Of the 24 units, 22 units were obligatory courses and two units were open to selection by the trainees – out of six possible options. The two optional units did account for just 180 hours. Proposed options were classroom organisation, non-formal education, home science, evaluation techniques, teaching and learning materials and physical education. Multigrade teaching was included as one of the subjects covered by the classroom organisation unit.

The status of multigrade teaching in the training curriculum was not significant when compared with other parts of the programme. First of all, only selected primary school teachers at the project sites were able to take the training. Since the classroom organisation unit was not obligatory, not all of them chose this unit. The classroom organisation unit represented a 90-hour unit consisting of 10 subjects. Multigrade teaching was one of these 10 subjects. Thus time allocated to multigrade teaching was only 12 hours out of a total of 1,280 hours. Therefore, even for the trainees who chose the classroom organisation unit, the exposure to multigrade teaching was small.

[7] The major donors were ADB, DANIDA, IDA, JICA and UNICEF for phase one (BPEP1) and DANIDA, EU, FINNIDA, IDA, JICA, NORAD and UNICEF for phase two (BPEP2). The project started with 19 districts and had expanded to 40 districts by the end of BPEP1. Subsequently BPEP2 expanded the project to all 75 districts of Nepal.

Multigrade teaching in the programme covered definition, as well as the principal features of multigrade teaching, reasons for multigrade teaching, strength and weaknesses of multigrade teaching, classroom management, and teaching methods and techniques (NCED, 1995). The training curriculum defined multigrade teaching as an instructional system where one teacher teaches students of two or more grades at the same time in one room or separate rooms. The training curriculum stated that when the teacher has to teach two grades together, he/she should involve one grade in individual or group work and teach the other grade. However, classroom management, teaching methods and techniques remained general teaching issues were not mentioned specifically in the context of multigrade teaching.

Additionally, the short-term training module for Multigrade Teaching Training was newly developed as a recurrent teacher training module. Among the new training modules developed by BPEP1, Teaching Methods, Educational Materials and Learning Strategy, as well as Evaluation, constituted the core modules of training for all primary school teachers. Additionally three 12-day teaching improvement training modules were developed: Grade Teaching, Extra-curricular Activities and Multigrade Teaching. They were offered to selected teachers who had specific needs.

Among the three modules on offer, Multigrade Teaching Training was chosen by the greatest number of trainees. Between 1992 and 1998, 994 trainees chose grade teaching, 1,448 chose extra curricular activities and 3,843 chose multigrade teaching (Shrestha et al., 1999). In fact, within the framework of training offered by BPEP1, only Multigrade Teaching Training was organised continuously every year from 1992/93 to 1998/99 (Shrestha et al., 1999). The number of teachers who participated in Multigrade Teaching Training was 158 in 1992/93, 1,514 in 1993/94, 903 in 1994/95, 584 in 1995/96, 292 in 1996/97 and 866 in 1997/98 (BPEP, 1998). The figures for 1998/99 are not available, but Multigrade Teaching Training was conducted in this year (Shrestha et al., 1999).

Multigrade Teaching Training did expand not only as far as the number of trainees is concerned. Multigrade Teaching Training also spread from the initial four pilot districts to all of the 40 districts of BPEP1. The training was conducted in the selected four districts in 1992/93, in 25 districts in 1993/94, 38 districts in 1994/95, 29 districts in 1995/96, 17 districts in 1996/97, and 40 districts in 1997/98 (BPEP, 1998). Grade Teaching Training and

Extra-curricular Training were not organised at all between 1996/97 and 1998/99. Of all 12-day Teaching Improvement Training modules, only Multigrade Teaching Training was conducted over the whole BPEP1 period and in all of the 40 project districts. All project districts thus obtained an experience in the organisation of Multigrade Teaching Training.

When the BPEP2 programme started in July 1999, it was meant to ensure retention and completion of courses, especially by girls and other disadvantaged groups. Multigrade teaching was included as one of the key features of the BPEP2. This is clearly stated: 'improvement in teaching practice in the classroom through the provision of recurrent training and timely provision of supplementary materials designed for multigrade instruction' (MOE, 1999a: 16).

Following this mission statement, BPEP2 planned components which included several strategies for multigrade teaching. The ten-month in-service primary teacher training and the short-term modular training of BPEP1 were retained. Additionally, in order to improve school facilities, classrooms were flexibly designed to suit the demands of multigrade schooling in mountain areas. The construction work was complemented by the development of supplementary material and textbooks, specifically designed for multigrade learning situations. In order to create a better learning environment, the class size was reduced to no more than 50 children in a regular class and 35 children in a multigrade classroom. The first three years were given priority in the development of teaching methods and materials in monograde schools, and material for all grades was prioritised in multigrade schools. Organisational strategies and materials for subject teaching in Grades 4 and 5 were developed for regular schools, and multigrade teaching organisational strategies and material were developed for small schools (MOE, 1999a).

Since the inception of modern schooling in 1951, multigrade teaching has been neglected despite its constant high frequency on the ground. Multigrade schools have hardly received substantial support from the government for nearly forty years. The existence of multigrade schools was eventually recognised, and some attention was given to them in the late 1980s. Once there was awareness of the problem, some support for multigrade teaching was developed to ensure access for the remaining disadvantaged groups, in order to raise the quality of education in the 1990s.

## 3.4 Current strategies for multigrade teaching

The still ongoing BPEP2 includes several strategies for multigrade teaching, but most of them are still in a preparatory phase.[8] Currently, only two types of refined in-service teacher training for multigrade teaching have been implemented. One is the Basic Primary Teacher Training, held at Primary Teacher Training Centres (PTTCs) for all primary school teachers. The other is Multigrade Teaching Training, held at the RCs for teachers who have particular needs. The contents of the two types of training are not intentionally linked, because they are developed in different administrative units.[9]

### 3.4.1 Basic Primary Teacher Training

The training scheme and the curriculum from the previous ten-month primary school teacher training programme with 24 units were revised. The ten-month period now consists of four packages. The first and last packages are face-to-face training programmes held at the PTTCs, whereas the second and third packages are distance education programmes distributed by radio. The first package is considered basic primary school teacher training, and constitutes the minimum requirement for all primary school teachers. Thus it contains all basic pedagogical knowledge which all primary school teachers should have.

In the framework of ten units of the ten-week first package, multigrade teaching is included in the second unit entitled Primary School Teaching (NCED, 2000). This unit covers class management and teaching activities. The training guide states that students in multigrade classes should enjoy the same benefits as those in monograde classes, that they should develop a feeling of responsibility, a habit of working together and also learn from each other. The training curriculum includes material on concepts, planning, methods and the management of multigrade teaching. This includes the making of timetables and self-learning activities, called 'group work'. The curriculum also insists on the points which require

[8] The main strategy still remains only in-service teacher training at present. However, proposals for a pilot project to develop supplementary self-learning material for multigrade teaching have been submitted and are awaiting approval.

[9] The Basic Primary Teacher Training is developed in NCED. Multigrade Teaching Training is developed in DOE.

attention in the implementation of multigrade teaching. Model timetables indicate that the ideal strategy of multigrade teaching is a teacher directly teaching for one class while providing 'group work' for self-learning to other classes. The training guide emphasises the fact that the multigrade teacher must involve the students of all grades in meaningful work, and must give extra work if some students terminate assigned 'group work' early.

Additionally multigrade teaching is included in the training curriculum of the second package (DEC, 2000). This package is a self-learning programme. The trainees who have completed the first package continue their training through a radio programme. There are 25 units in the second package, three of which are for multigrade teaching. The first unit discusses the definition of multigrade teaching and provides guidelines for multigrade teaching. The second unit concerns the advantages of multigrade teaching. The third unit discusses the disadvantages of multigrade teaching.

In the latest version of the training curriculum, the amount of learning time spent on multigrade teaching in the first package is reduced from 12 to 9 hours (NCED, 2000). The course contents remain very general yet and do not provide specific multigrade teaching strategies. However, the status of multigrade teaching in the ten-month training programme has improved. Multigrade teaching in both the first and the second packages is an obligatory subject for all trainees. Especially multigrade teaching is included as the minimum basic knowledge in the first package. This is the main difference in comparison with the previous ten-month training programme of BPEP1. Multigrade teaching then had been an optional subject for teachers who specifically needed to know about multigrade teaching strategies in the previous training scheme. Now knowledge of multigrade teaching has become an obligatory subject for all primary school teachers. Multigrade teaching is less neglected than it was before. The issue of multigrade teaching is raised with all primary school teachers.

### 3.4.2 Multigrade Teaching Training

As far as short in-service training is concerned, the previous 12-day training programme has been developed into a 10-day training programme. The seven new training modules which have been developed by the Primary Teachers' Training Unit (PTTU) include Grade Teaching, Multigrade Teaching, Primary School Head Master Training, Teaching Methods,

Educational Material, Learning Process and Evaluation as well as Curriculum Dissemination. According to the training policies specified by the government, all primary school teachers employed by the government have to take at least one training module per year.

## 3.5 Conclusion

Chapter Two identified Nepal as belonging – in international comparison – to the second category of countries, i. e. a country which lacks specific policies, but has a strategy for multigrade teaching. This chapter focused on Nepal and explored the details of the current situation and strategies in relation to multigrade teaching.

Looking at teacher-school ratios, it becomes apparent that multigrade teaching is very frequent in Nepal. The primary school teacher to school ratio in Nepal was 3.8 in 1998.[10] But considering that the ratio in Kathmandu valley, where only 5.98% of primary schools are located, was 6.4, most parts of the country would seem to be afflicted by an even greater shortage of primary school teachers. Also, the teacher-school ratio in rural areas is lower than in urban areas, while the percentage of urban schools is less than 10% of all primary schools. Thus only a limited number of schools have sufficient teachers for all primary grades. Moreover, the frequency of multigrade teaching is increasing. In comparison with the 1980s the gap between the number of teachers required and the actual number of teachers employed has widened in the 1990s. The teacher-school ratio has decreased from 4.0 in 1996 to 3.9 in 1997 and 3.8 in 1998.

Multigrade teaching is closely related to access, equality and quality of primary education in Nepal. This relation indicates that multigrade teaching has the potential to play a significant role in primary education in Nepal. The student learning achievement is consistently related to the amount of time available for teaching and learning, and to how this time is used. However, students in multigrade schools tend to have less learning time. Thus time efficiency in multigrade teaching is especially crucial for improving student achievement. Furthermore, multigrade schools often enrol girls, minorities and low castes who cannot enter

[10] Unfortunately this figure does not allow comparison with the percentage figures for multigrade teaching in other countries which are shown in Table 2-1.

larger monograde schools. Improving multigrade teaching can possibly be one of the keys to tackling the serious problems Nepal is currently facing.

Although multigrade teaching has never been systematised since the inception of a modern education system in the early 1950s, some strategies for multigrade teaching has been implemented since the late 1980s. Currently two types of in-service teacher training for multigrade teaching have been implemented. One is the ten-month Basic Primary Teacher Training for all primary school teachers. The other is the ten-day Multigrade Teaching Training for teachers with particular needs. The ten-day training will be investigated closely in Chapters Seven to Ten.

# Chapter Four
# Research Design and Methods

The previous chapters have addressed the context and system characteristics of multigrade teaching in Nepal. They have been based largely on documentary evidence. In order to answer the second, third, fourth and fifth research questions, field research has been conducted in Nepal. This chapter presents the research design and methods used in the field. The first section explores the methodologies underpinning the construction of the research design. The second section tries to distinguish this study from the general Multigrade Teaching Project. The third section describes the research designs chosen for this study. The fourth section clarifies the access to the research. The fifth section discusses the role of the researcher. The sixth section presents the research methods used to collect the data. The seventh section justifies the sample selection for the study. The eighth section presents an account of data analysis. The ninth section discusses ethical issues. Finally, the tenth section clarifies the limitations and challenges of this study.

## 4.1 A theoretical account of the approach taken

Historically quantification has dominated in scientific research. Positivism has been the mainstream of natural and social sciences for over 400 years (Guba and Lincoln, 1994). Although positivism still remains the most influential school, its critics have become important and several alternative approaches have emerged. Habermas (1972) categorises paradigms according to three characteristics.[1] Guba and Lincoln (1994) categorise four paradigms.[2]

This study is conducted with a great emphasis on qualitative methods, placed somewhere near the centre of the wide range from 'ultra-hard,' as in the work of Sechrest (1992) who believes that only quantitative data is valid, to 'ultra-soft,' for example Nesfield-Cookson (1987) who believes that human life cannot be measured on a physical scale and Glaser and Strauss (1967) who argue that qualitative methods are the only methods suitable for field

[1] Habermas (1972) categorises paradigms as 'technical', including positivism, 'practical', including interpretivism and 'emancipatory', including critical theory.

research.

The basis of this study is a qualitative method which appreciates social values, because accusations of irrelevance and invalidity against positivism in social sciences are understandable. However, this study aims to be more constructive and innovative than studies simply trying to be informative, it tries to understand and describe a given phenomenon. As far as replicability is concerned, this study – as educational research on formal schooling in general – takes account of generalisation. Formal schooling is related to public policy making for mass populations. This study aims for an improvement of current formal schooling. Public policy decisions should address certain populations, i. e. they should be applicable to wider groups, not just a particular case. Therefore, while taking into account contextual information and insights into the social world, this study has a certain level of generalisation. Thus the position of this study combines both quantitative and qualitative aspects with a great emphasis on qualitative methods.

## 4.2 Multigrade Teaching Project

This study was conducted alongside an international research project, the Multigrade Teaching Project, carried out by the Institute of Education, University of London. The project aims at describing the extent and practice of multigrade teaching, it attempts to conduct an intervention study through action research and to make recommendations on multigrade teaching (The Multigrade Research Group, 2001). The researchers within the project work individually on these common concerns in different countries. As the general concerns of this study are similar to those of the project, the initial project design of the Multigrade Teaching Project is considered to be a significant reference point.

Although each of the researchers works on the common concerns, each country study is uniquely conceived and framed by different research questions and designs. Each researcher determines her own field sites, types of schools, the number of schools and classrooms, the length of research, research methods and their indicators. Moreover, as I am a self-funded scholar, my academic freedom has been granted. Unlike other researchers, I did not elect to

[2] Guba and Lincoln (1994) categorise paradigms into positivism, post-positivism, critical theory and constructivism – in relation to selected social and practical issues. Some modify the tradition of positivism,

conduct an intervention study, because this is not adjustable to the aims of this study. Instead, I have chosen evaluation of teacher training, because Nepal conducts teacher training as a strategy to improve current multigrade teaching (Chapter 3). Evaluation can assess effects and effectiveness of intervention for change (Robson, 1993). Thus existing teacher training is evaluated in order to assess interaction (and its effects) between the training policy and current practice of multigrade teaching.

## 4.3 Evaluation study

Table 4-1 The framework of evaluation of teacher training

| | types of evaluation | stages of evaluation | what to evaluate |
|---|---|---|---|
| 1 | Needs-based evaluation<br>1.1 Context evaluation<br>1.2 Input evaluation | before the training | -current conditions and problems of the environment<br>- the capabilities of the change agent, of strategies, and designs |
| 2 | Process evaluation | during the training | -what takes place in the training |
| 3 | Output evaluation | after the training | - programme results and effectiveness |

Evaluation aims at judging the value of a training programme in relation to its design, administration, effectiveness and efficiency; this is done through evidence, beliefs and interpretations (Windham and Chapman, 1990). Training innovations are successful when they are relevant, beneficial and feasible for the user, flexible and adaptable, compatible with existing values, have advantages over other choices, and contain no disadvantages (Bishop, 1986). As innovation is a social process, three dimensions of time should be considered: the situation before the programme, the interaction between change agent and the user during the programme, and the situation after the programme (Bishop, 1986). Matching these three time dimensions, there are three stages of evaluation (Table 4-1; Borich, 1990; Windham and Chapman, 1990). Although output evaluation attracts most audiences, meaningful evaluation should be done multi-dimensionally because output evaluation is only part of evaluation (Centre for Educational Research and Innovation, 1982; Henderson, 1978). An appropriate balance of process and output evaluation is necessary (McCoy and Reynolds, 1998). This study therefore operates multi-dimensionally, evaluating inputs, process and outputs of the training.

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others challenge it (Cohen et al., 2000; Guba and Lincoln, 1994; Layder, 1993).

### 4.3.1 Needs-based evaluation

Needs-based evaluation is to be undertaken before the training. It examines which actual client needs are attained (Robson, 1993). It includes context evaluation and input evaluation (Borich, 1990; Windham and Chapman, 1990).

*Context evaluation*

Context evaluation identifies the current conditions and problems of the environment (Borich, 1990; Windham and Chapman, 1990). In order to get the broader picture of multigrade schools, schools are initially visited half a day to obtain preliminary knowledge and understand the context of the schools. For deeper and more acute understanding of the particular phenomena in the classrooms, selected schools among the initially visited schools have subsequently been visited for intensive classroom observations.

*Input evaluation*

Input evaluation assesses the relevant capabilities of the change agent, of strategies, and designs (Windham and Chapman, 1990). Input evaluation is conducted to determine the validity of the training inputs in relation to the needs of multigrade teachers. First, the relevance of the training curriculum is evaluated, including the characteristics of training developers and trainers, and the contents of the training materials. Research on training curricula has been neglected for the last twenty years, but many complaints and criticisms of training curricula have been formulated (Dove, 1986). In this study, the training materials are analysed and related personnel is interviewed. This data is analysed in the light of the theories on innovation and change, which leads to an identification of which of the models of innovation and change best explains the training programme.

Second, the perception of the trainers as transformers of the training messages is evaluated. The success of the training depends on the amount of expertise already acquired (Andrews et al., 1990). The trainers are trained and the training is expanded through the cascade system. Therefore, the effectiveness of the cascade system is assessed.

Third, the validity of the training in relation to the needs of the trainees is evaluated. The identification of the training needs of trainees is the key factor of successful training (Williams, 1991). The characteristics of the trainees, including experience, language, culture, qualification and attitude, are crucial factors in order to identify and assess their needs (Burgess et al., 1993; Dove, 1986). Experience and existing knowledge influence the transfer of training contents. Regression and deficits in cognitive abilities become apparent. In contrast, the cognitive capacity of older adults may function in a qualitatively different way when compared with youths. Mature adults are stable and maintain greater awareness of the social context or dimensions of a problem (Mezirow, 1991). The motivation of the trainees influences the effectiveness of the training (Andrews et al., 1990). A local dimension must be introduced to the training in order to improve the management, quality and relevance of the training (Caillods, 1992).

### 4.3.2 Process evaluation

Formative, implementation or process evaluation is to be undertaken during the training. During the last two decades, research on the process of training has been neglected, because only actual observation and analysis of the interaction can show whether the intention of the change agent is transferred to the trainees. This requires a great deal of time and patience (Dove, 1986; McCoy and Reynolds, 1998). Nevertheless, the process of the training determines the quality of the training (Dove, 1986). It is the most critical part of evaluation (McCoy and Reynolds, 1998). Supported by normative theory, it provides on-going information for understanding what is actually happening in the programme (McCoy and Reynolds, 1998; Windham and Chapman, 1990). How the training works and why, and how the activities are connected to outcomes is clarified through this evaluation (McCoy and Reynolds, 1998).

In this study, process evaluation has been conducted in order to understand what happens during the training sessions. Process is evaluated by documenting through observation with a high degree of detail what actually occurs during the programme (McCoy and Reynolds, 1998; Robson, 1993). This data can show the extent of the coverage of the programme, its appropriateness for the participants, the components experienced by the participants, its fidelity towards the intentions of the programme, the level of satisfaction of the participants,

staff qualification of people operating the programme and outside factors which affect training. Data is collected not only from individuals using the programme, but also from those delivering it (McCoy and Reynolds, 1998).

In process evaluation also the appropriateness of the operation of teacher training is assessed. Procedures should be flexible and adaptable to individual teacher needs (Dove, 1986). Teacher training can only make a difference for the quality of education when it uses adequate types of training and on-going support (Craig et al., 1998). Andrews et al. (1990) concluded through their study of questionnaires that the most successful variant of the local teacher centre model is trainee centred. Discontinuous one-off training without follow-up is not effective (Lockheed et al, 1991). Regular and rigorous supervision by supervisors or consultants is needed for successful training (Andrews et al., 1990). Therefore, this study does not only investigate the training sessions but also the follow-up support activities.

### 4.3.3 Output evaluation

Summative, productive or output evaluation is to be undertaken after the training. Supported by causal theory, it determines programme results and effectiveness (Robson, 1993); and identifies what effects have been achieved and what outcomes have been attained (Windham and Chapman, 1990). Robson (1993) distinguishes two kinds of output evaluation. One is impact evaluation. The use of product evaluation restricts the questions asked to those concerning intended outcome. The value of outputs is judged based on expected targets (Borich, 1990). The task is measuring to what extent a programme meets its stated objectives or goals. The other form of output evaluation is discrepancy evaluation which compares outcome ideals to actual achievement. The discrepancy between the 'official' view of what should happen, and what is actually taking place, is substantial (Robson 1993).

In this study, output of the training is measured, considering both its direct impact contributing towards the training goals, and its discrepancy impact on sub-effects unintended in the training objectives. 'Innovation adoption is not accomplished just because a decision maker has announced it', rather there is a wide variation in the actual use of innovations taught (Hall et al.; 1975). It cannot be presumed that the performance of the trainee-teachers improves just because they have taken the training. It is necessary to evaluate whether the

trainee-teachers really acquire the knowledge presented in the training programme and actually use it in their classrooms in a way the training intends them to do. Thus knowledge and performance of the trainee-teachers after the training is assessed. Perceptions of the trainee as a user of the programme are also assessed. When the user does not understand and adopt the innovations presented, no change takes place. The user often perceives innovations very differently from the intentions of change agent (Bishop, 1986). Additionally, the trainer's evaluation is supplemented by my own evaluation results; this allows comparative and more secure conclusions.

## 4.4 Research Access

I have been affiliated to the Research Centre for Educational Innovation and Development (CERID) at Tribhuban University as a visiting student. This has given me access to research in Nepal. Instead of donor agencies or NGOs, a domestic academic institution has been selected in order to avoid international political influence and the potential bias of a funded project in this work. This has also assured great autonomy and the academic freedom to select appropriate research sites and methods.

As an initial stage of the research, a formal written approach should be taken to obtain permission to conduct the research (Bell, 1999: 37). In March 2000, I have submitted the written research proposal through official channels. The official research permission was obtained from the Ministry of Education and Tribhuban University. Together with my research outline submitted to the director of CERID, the key persons to meet with were identified. The appointments with policy makers and officers in Kathmandu were made formally through CERID. At the first interview, I always explained my status, research purpose and research outline. In order to decide on the field districts where to conduct the research, I was introduced to several District Education Officers (DEOs) of the districts which had been preliminarily selected for school visits. This selection was based on the national statistics. Based on my research proposal and given adequate explanation of my research, the DEOs gave me permission to conduct fieldwork in their districts.

CERID has provided me with a formal certificate, clearly stating in Nepalese who I am and what my research is about, its purpose and activities. The certificate requests to let me

conduct fieldwork. During the first meetings, I showed this formal certificate to officers at District Education Offices (DEOs), resource persons, school headmasters/headmistresses and all teachers, training trainers and trainees and asked them for research permissions. I was with an interpreter to explain all this in Nepalese. From the second visit onwards, I always telephoned from Kathmandu to DEOs or, if possible, resource persons to get the permission to visit. When I arrived, the district officers, resource persons or myself asked headmasters/headmistresses for the research permissions for school visits. For the training observation, the permission of the head of PTTU and of master trainers was previously obtained in Kathmandu. Additionally, the permission to attend DTOT and RCTs was previously obtained by DEOs, officers and trainers. The permissions from the trainees were requested on the first day of the training.

When I finally terminated my fieldwork in March 2002, I visited the relevant persons in the central offices, the DEOs and the schools to thank them for their co-operation during 20 months and inform them that my research had finally ended.

## 4.5 The role of the researcher

The researcher 'can take roles that range anywhere from the hidden or disguised voyeur, who watches from outside or with a passive (even electronic) presence, to the active participant, involved in the setting, who acts as a member and not as a researcher so as not to alter the flow of the interaction unnaturally' (Adler and Adler, 1998: 85). I concede of course that no researcher can completely avoid the unintended effects of the presence of a researcher in a study (Brown and Dowling, 1998), but my financial autonomy and my status as an independent researcher have minimised this as far as possible. As the Multigrade Teaching Project does not officially include Nepal, the project is no apparent political factor in Nepal. There was no further link between myself and CERID beyond that of an ordinary visiting student, paying regular tuition fees. CERID researchers and government officials have never accompanied me in the field, nor have I used official project vehicles.

Although it is impossible to completely control the influence of my presence, I have tried to adopt two of roles of the researcher, as described in Adler and Adler's (1998: 84-86) classification of research participants. In the short school visits of this study, I have attempted

to act as the 'observer-as-participant', defined as a 'researcher... primarily observing his subjects for extremely brief periods as he attempts to conduct structured interviews ... this is clearly an overt role, as the observer's identity remains strongly research oriented and does not cross into the friendship domain' (Adler and Adler, 1998: 84). The short school visits are a form of preliminary enquiry, intended to collect contextual school information as efficiently as possible. Therefore, the development of friendship with the research participants is not particularly likely, and the researcher remains outside the research setting. At the same time this stage constitutes the initial phase of the field research and I could not avoid formal introductions, because I was accompanied by the relevant resource persons. Overall however, the relationship between the researcher and the participants implies only little and weak interaction at this stage.

In the longer school visits and during training evaluation, I have tried to assume the 'peripheral membership role', described as: 'the researchers feel that an insider's perspective is vital to forming an accurate appraisal of human group life, so they observe and interact closely enough with members to establish an insider's identity without participation in those activities constituting the core of group membership' (Adler and Adler, 1998: 85). These subsequent stages constitute the core of the enquiry and the position of the researcher as an insider is considered to be important. As my Nepalese is not fluent, I have not tried to be an active, core member of the research setting. However, my position has shifted from outside of the setting, as in the initial stage, to part of the setting. The relationship between the researcher and the participants has gradually moved to increased interaction.

## 4.6 Research methods for data collection

In order to ameliorate the research, 'a multi-layered approach should be adopted', going beyond the debate on different research strategies as appropriate for the examination of different levels of social life (Scott and Usher, 1999). Taking advantage of their strengths and weaknesses, both quantitative and qualitative methods are included in the school visits and evaluation designs. Since both school visits and evaluation are qualitative designs, the whole study aims at a qualitative approach. This stance leads to the use of mainly qualitative methods for the collection and analysis of data. Qualitative research ranges from loosely unstructured to highly structured types (Robson, 1993). Two kinds of visits have been

conducted for this research. Quantitative methods are incorporated to allow replication or generalisation. Table 4-2 indicates research methods used in the fieldwork.

Table 4-2 Research methods used in the fieldwork

| research questions | topics | chapters | research methods | evaluations |
|---|---|---|---|---|
| 2-1 | multigrade school context | 5 | semi-structured interview with teachers (a check list) | context evaluation (schools) |
| 2-2 | multigrade school inputs | 5 | semi-structured interview with teachers (a check list) | |
| 2-3 | multigrade school outputs | 5 | schools' records | |
| 3-1 | multigrade classroom conditions | 6 | class observation, questionnaires | context evaluation (classrooms) |
| 3-2 | multigrade class organisations | 6 | class observation, questionnaires | |
| 3-3 | methods of multigrade teaching | 6 | class observation, questionnaires | |
| 3-4 | problems identified by the researcher | 6 | class observation | |
| 3-5 | problems identified by teachers | 6 | questionnaires | input evaluation |
| 3-6 | need identified by teachers | 6 | questionnaires | |
| 4-1 | ideal model of multigrade teaching | 7 | material analysis | |
| 4-2 | training contents | 7 | material analysis | |
| 4-3 | training organisers | 7 | open-ended interview with officers and trainers | |
| 4-4 | cascade models of training | 7 | training observation, open-ended interview with trainers | |
| 4-5 | characteristics of trainees | 7 | questionnaires | |
| 4-6 | process of training | 8 | training observation, open-ended interview with trainers | process evaluation |
| 4-7 | trainees' self-evaluation | 8 | self-evaluation forms | output evaluation |
| 4-8 | follow up by trainers | 8 | open-ended interview with trainers | |
| 4-9 | knowledge and competence acquired by trainees | 9 | training observation | |
| 4-10 | training impact in classrooms | 9 | class observation, open-ended interview with teachers | |
| 4-11 | trainers' evaluation | 9 | focus group discussions | |

I have chosen the above procedures because school visits allow to understand the real world and provide a unique example of situations with rich, value-free, inductive, detailed information (Cohen et al., 2000).

*Short school visits*

In order to understand the whole structure, multigrade input, process and output are measured by semi-structured methods. The data are collected through three orthodox methods for qualitative studies (Robson, 1993). First, a semi-structured interview, using a checklist of relevant factors, has been conducted with the headmaster/headmistress. Second, multigrade classes are observed. Third, the school records, consisting of student attendance records and individual student test scores in the Grade 5 district level examinations are collected. The indicators developed following the example of studies of Heneveld and Craig (1996) on effective schools and Nielsen et al. (1993) on multigrade teaching.

*Longer school visits*

The main research method is simple classroom observation. In order to understand an unknown phenomenon while preserving a value-free posture, longer school visits are unstructured.

*Questionnaires to confirm the results from the school visits*

In addition to the three orthodox qualitative methods, a quantitative method has been incorporated. The results from the school visits are confirmed and by questionnaires. Through the questionnaires, the current situation of multigrade schools in the wider context is explored and determined the position of the studied schools. The questionnaires assure the replicability of the results obtained by qualitative methods.

*Training Evaluation*

For input evaluation four methods are used: documents analysis such as the training materials, master training observations, open-ended interviews and questionnaires. In process evaluation, the main method is the RCT training observation. For output evaluation, six methods have been adopted: questionnaires, self-evaluation forms, practice teaching observation, classroom observation of selected trainees, open-ended interviews, and focus group discussions

### 4.6.1 Observations

*Advantages*

Observation is the main method used in this study, because it is a natural and direct technique to investigate what research participants do in the real world (Alder and Alder, 1998: 79; Robson, 1993: 190). It examines current teaching practice and provides insight as well as rich and detailed documentation (Cohen et al., 2000). A major advantage of observation is its 'directness' (Robson, 1993: 191). Through observation it is possible to gain 'access to settings' unobtrusively, because observation does not require direct interaction with participants (Alder and Alder, 1998: 89). Another advantage is its 'creativity' and the 'emergence' from old realties (Alder and Alder, 1998: 89). Its naturalistic features and flexibility bring insights into new ways of understandings and help to change fixed ideas.

In this study classrooms have been observed in order to understand the practice of multigrade teaching (research questions 3-1 to 3-4) and to assess the practice of multigrade teaching of selected trainees with regard to the impact of their training (RQ 4-10). Complete days were spent in each school with the observation programme including the classroom, the teacher's office and the corridors. This allows understanding of how the particular grade of students spends the day in school. Training sessions of the cascade system at the target sites were observed in order to assess the process of training and (RQs 4-4, 4-6) and evaluate the progress of trainees after the training (RQ 4-9). In order to strengthen the natural character of the observation, I have chosen to take notes by hand, using quick fragmentary key words and symbols. This method allows an immediate and fresh account, a full picture of events, and promotes an economic use of time (Cohen et al., 2000; Wragg, 1999). This naturalistic approach is used to measure 'life as it really is', rather than categorise it into a framework based on theory.

*Disadvantages*

Although the naturalistic approach is frequently used in observation studies, there is a serious danger of it becoming subjective (Wragg, 1999). The main criticisms levelled against observation concerns its 'validity' (Alder and Alder, 1998: 87). As the researcher has to rely on his own perceptions, his interpretations easily descend into subjectivity. In order to decrease the subjectivity of the observation data, the instrument of *time scale* has been used as an indicator in documentation (Wragg, 1999). To do time sampling, natural units during which something interesting occurs are measured. These units reflect the actual periods of

time where specific activities take place. In order to further alleviate the disadvantages of observation, complementary methods including interviews, questionnaires, self-evaluation forms and focus group discussions have been used to cross check the data.

'The effects of the researcher' constitute another disadvantage of observation (Alder and Alder, 1998: 89). One possible solution is to get the participants accustomed to the presence of the researcher so that they act as if he or she were not there (Robson, 1993: 191). In order to achieve this, the observations were conducted on consecutive days and several times over a long period so that the researcher became familiar to the participants. Verbal communication and eye contact with the participants were avoided to be as inconspicuous as possible during lessons and training sessions.

Another significant disadvantage of observation is its 'lack of reliability' (Alder and Alder, 1998: 88). Because the data collected is not statistically representative, the researcher cannot generalise its results. In order to tackle this problem, interview, questionnaires and focus group discussions were used to confirm observation data by a larger number of samples. As observation is time-consuming, the number of class observations has to be limited. Semi-structure interviews with larger numbers of interviewees and questionnaires from all teachers in the targeted resource centres help to corroborate observation results. The data of training observation is corroborated in the same way by open interviews with the trainers. The impact of the training in the classrooms is verified through focus group discussions with all trainers in the districts concerned.

### 4.6.2 Interviews

Observation is accompanied by other methods, including three types of interviews. The interview has several advantages. Compared with observations, the interview is more direct, and constitutes a fast method of investigation, directly asking interviewees about themselves (Robson, 1993: 229). Compared with postal questionnaires, the interview is more flexible and efficient for data collection. The face-to-face setting increases the interpersonal aspect of the interview as a data source. Interviews allow more flexibility for confirming replies, increase the quantity of data, its depth and the return rates (Block, 2000). Interviews allow collecting data not only through what is said, but also through non-verbal cues (Robson,

1993: 229). While the interview is time-consuming compared to self-administrated questionnaires, it is less time-consuming than observation. Because it is less time-consuming, equal in flexibility to observation and has better results than questionnaires, interviews are used as the second major source of data collection.

*Semi-structured interviews*

During the short school visits, semi-structured interviews with the headmaster/headmistress and teachers were used as the first steps of the research. These interviews use a checklist of relevant factors (RQs 2-1, 2-2). Although the (semi-) structured interview is not entirely appropriate for naturalistic research (Alder and Alder, 1998: 84), it is useful for preparatory studies (Robson, 1993: 235). As set questions are prepared in advance, the responses can be recorded efficiently in a standardised and straightforward manner (Fontana and Frey, 1998: 52; Robson, 1993: 230). Through their fixed structure semi-structured interviews minimise errors (Fontana and Frey, 1998: 53). In this respect, a (semi-) structured interview is very similar to a questionnaire (Robson, 1993: 236). However, the interview provides better results than sending out questionnaires (Wragg, 1999), because the face-to-face setting can motivate interviewees in a way which the questionnaire cannot (Robson, 1993: 229).

On the other hand, the advantages of the fixed structure are limited with an interview, because it takes place in a social interaction context (Fontana and Frey, 1998: 53). As this was the initial phase of the research, I had to rely on interpreters. Relying on interpreters makes the research vulnerable to misleading responses (Fontana and Frey, 1998: 58). Therefore, semi-structured interviews are used only to collect overt contextual information such as distance of the school from the town, number of teachers and students, availability of textbooks, visits by local supervisors, community support, origin and current residence of the personnel, qualification, in-service teacher training received, teaching experience of teachers, and ways of combining classes. Also, semi-structured interviews were adopted instead of structured interviews because they allow greater qualitative freedom (Robson, 1993: 229).

*Open-ended interviews*

Open-ended interviews were conducted with officers and trainers to understand who organises the training, how it operates (RQ 4-3) and how follow-up activities after the training are organised (RQ 4-8). They were also conducted in order to confirm the

observation data and to understand the meaning of behaviour observed (RQs 4-4, 4-6, 4-10). Open-ended interviews provide data of qualitative nature, and allow deeper and wider understandings than other types of interviews (Fontana and Frey, 1998: 56). They show the meaning beneath the surface of the behaviour of the participants (Brown and Dowling, 1998, 60). Interviews were often conducted informally and in English. Interpreters were present only for the last visit to clarify uncertainties.

*Focus group discussions*

Focus group discussions were organised with all RCT trainers in the districts in order to confirm the results concerning the impact of training in the selected classrooms (RQ 4-11). It is a form of group interview, with discussions on a specific topic by a given group (Cohen et al., 2000, 288). There are several advantages. The focus group discussion yields a wider range of responses, because of the interactions within the group. It brings varied opinions together and takes less time than individual interviews (Cohen et al., 2000, 287). It allows participants' views and images to emerge, but at the same time gives control to the researcher (Robson, 1993: 240). On the other hand, the data collected in focus group discussions is of little use for individual details (Cohen et al., 2000, 287). Thus, focus group discussions are used to confirm the results from class observations on broad topics, rather than to investigate individual training aspects.

It is a disadvantage of all types of interviews that they require a lot of preparation and practical skills to obtain free and open statements and to reduce the risk of the researcher influencing the interviewees with leading or biased questions (Robson, 1993: 230). The design of the interviews used was carefully prepared, including checklists for semi-structured interviews. I did one-month of training for interviewing in rural Thailand in order to obtain the necessary skills, and throughout the interviews put a continuing effort into decreasing the effect of the researcher. Focus group discussions require good skills for chairing (Cohen et al., 2000, 287). During the focus group discussions, I have to remind myself of being only a facilitator and to only activate discussions.

### 4.6.3 Questionnaires

*Advantages*

Self-completion questionnaires are very efficient as far as the researcher's time and effort are concerned, because covering many informants they only take the time of a single interview or observation (Cohen et al., 2000, 243). Because of this efficiency, questionnaires, including self-evaluation forms, have been incorporated in this study. They investigate the insights and perceptions of all trainees, including multigrade teachers, identify their background, including their multigrade experience and their reasons for attending the training course (RQs 3-5, 3-6, 4-5, 4-7). The questionnaires were distributed to all trainees on the first day of RCT training. This allows to measure the basic knowledge of the trainees concerning multigrade teaching before the training. Self-evaluation forms were filled in by all trainees on the last day of RCT, measuring the acquisition of knowledge on multigrade teaching during the training.

Another use of questionnaires – one of their numerous advantages – is confirming the results obtained through a necessarily limited number of observations. Questionnaires are distributed to a large number of teachers and allow to determine the position of the schools observed in a wider context (RQs 3-1, 3-2, 3-3). This has been necessary, because in order to provide rich and deep information, the number of sample schools had to be limited. The questionnaires are meant to assure the replicability of the results obtained through observation. The questionnaires were filled in by all primary school teachers who currently teach multigrade classes in the two Resource Centres (RCs) conducted. Through the questionnaires the current situation of multigrade schools was more fully explored.

*Disadvantages*

A problem with questionnaires is their superficiality; the researcher can hardly check neither honesty nor seriousness of the responses (Cohen et al., 2000, 243). However, when the researcher is on the spot, better results can be achieved than in a situation where the researcher just sends out the questionnaires (Wragg, 1999). Thus questionnaires for this study were distributed during opening and closing ceremonies of the training courses, in the presence of the researcher.

## 4.7 Sample selections

### 4.7.1 School visits

The Central hill region has been selected because the region is one of the two least advantaged regions as far as the teacher-school ratio is concerned (Table 3-2). There are also a great number of multigrade primary schools, compared with other parts of Nepal.

The criterion determining the selection of Nuwakot district is the high demand for multigrade teacher training packages by the district. Nuwakot district has been supported by the BPEP since 1992. BPEP has provided Multigrade Teacher Training for seven years. Nuwakot district accounts for a high portion of Multigrade Teacher Training among the project districts (according to documents of BPEP (1998) and DOE (1999)). Two further criteria have been considered: (1) transport accessibility and (2) security. Kavre district has been selected as a contrast to Nuwakot district because the district was not supported by BPEP until 1997. Hence the teachers in Kavre district have never received Multigrade Teacher Training.

Although secondary schools also contain the grades of the primary school stage, only schools limited to Grades 1 to 5 (i.e. 'real' primary schools) have been studied. There are three reasons for this decision. First, it is difficult to understand the conditions of the primary level in secondary schools. Teachers working at secondary schools teach across all grades in their school, including primary. Therefore, it is difficult to understand who is really teaching for the primary level. Second, secondary schools tend to be located in urban areas or bigger villages where the educational environment is better than in rural areas. Thus there are relatively more teachers and better resources in secondary school. Third, the number of primary schools is higher than that of secondary schools.

Eight multigrade primary schools in Nuwakot district [3] and six multigrade primary schools in Kavre district have been selected for short school visits, after consultation with university researchers, the DEOs and Resource Persons (Table 4-3). The existence of different types of multigrade class organisation, their transport accessibility, the walking distance and security have been considered in order to select the 14 schools.

[3] Reference document was DEO of Nuwakot (2000c).

Table 4-3 Number of primary multigrade schools and teachers selected for understanding of multigrade teaching

| Districts | Nuwakot | Kavre | Total |
|---|---|---|---|
| multigrade schools (short school visits) | 8 | 6 | 14 |
| multigrade schools (longer school visits) | 3 | 2 | 5 |
| multigrade teachers (questionnaires) | 35 | 21 | 56 |

Five schools among the 14 schools visited have been selected for longer school visits. Three schools are located in Nuwakot district and two in Kavre district. The schools have been selected because of the different types of class organisation observed in the shorter school visits.

Questionnaires have been filled in by 35 multigrade teachers in Nuwakot district and 21 in Kavre district. The questionnaires have been distributed to all primary school teachers who are currently teaching multigrade classes in the Trisuli RC, Nuwakto district and Sunthan RC, Kavre district where the case studies have been conducted.

### 4.7.2 Training evaluation

In order to follow functioning of the cascade system of the training, the following training sessions have been observed (Table 4-4). MTOT is conducted in the six regional zones of Biratnagar, Nepalganji, Danosa, Chitowan, Kairali and Rupanehi. MTOT in the Chitwan zone has been selected for observation, because this zone includes Nuwakot and Kavre district. Only the DTOT of Kavre district has been observed, because Nuwakot district had the same training during the previous year so that DTOT was not organised in the year of my study. Kavre district had never had multigrade teaching training before, hence DTOT was organised in Kavre district for the first time. Finally RCTs in Trisli RC in Nuwakot district and Sunthan RC in Kavre district have been selected for observation, because the schools visited in the case studies belong to these two RCs.

Table 4-4 Multigrade training sessions observed for evaluation

| training | observed cases | date |
|---|---|---|
| MTOT | Chitwan zone | January 2001 |
| DTOT | Kavre district | May 2001 |
| RCTs | Nuwakot district (Trisli RC)<br>Kavre district (Sunthan RC) | June/July 2001 |

For output evaluation, questionnaires and evaluation forms have been distributed to all

trainees. Table 4-4 shows the number of trainees who filled in forms. Practice teaching of some trainees during the training has been observed. Among the trainees five multigrade teachers who teach in the schools visited in the case studies have been selected.

Table 4-5 Number of training trainees researched in the evaluation

| Districts | Nuwakot | Kavre | Total |
|---|---|---|---|
| Questionnaires (all trainees) | 58 | 29 | 87 |
| Evaluation forms (all trainees) | 67 | 31 | 98 |
| Practice teaching (some trainees) | 21 | 0 | 21 |
| Class observations (selected trainees) | 3 | 2 | 5 |

## 4.8 An account of data analysis

The data produced by any field study is subject to interpretation, which means that the researcher cannot avoid her own bias in the narration (Holliday, 2003: 4). Recognising this fact, I have tried to distance myself from the data collected as far as possible and intend to be, where possible, only a facilitator in the process of analysis, and to make the data provide its own narrating as far as possible (Blaxter et al., 1996: 198). Thus the data is first described with very little of my own input, and the voice of the participants is presented as directly as possible. Only then do I approach the data to extract commonalities, differences and outstanding issues, using the explicit evidence of various indicators and code words. In a third step the data is analysed globally, interpreting meanings and interrelations.

### 4.8.1 Practice of multigrade teaching

The data collected is presented in such a way as to describe what the researcher has observed. School information is shown contextually, in order to analyse the status of a given school in comparison to the international and national context – as presented in chapters two and three (Chapter 5). Classroom information is presented in a form which shows the interaction during a lesson between the teachers and the grades they teach (Chapter 6). Observation data is presented in tables or diagrams to allow visualisation. Within the data presented, commonalities and differences in terms of class activities and time spent in each grade are pointed out (Suzuki, 2000). Based on this comparison, the observation data is classified into five patterns which show the different features of multigrade teaching in the classroom (6.2). The patterns which are identified are cross-checked against the questionnaires. The factors

which differentiate the five patterns are analysed by the researcher to identify problems and needs of multigrade teaching (6.4).

Alongside the analysis of the researcher, the perception of the participants is analysed. Their voices are cited with a minimum of interpretation by the researcher in order to give the reader a feeling of their negative perceptions and motivations. The data from the questionnaires is micro-aggregated to derive its 'average features'; this is done on the basis of numerous figures and statistics which reveal tendencies and dispersion (Blaxter et al., 1996: 194).

Finally, problems and needs of multigrade teaching at the sites which have been analysed are identified, integrating the concerns of the participants *and* the researcher. This process allows the identification of the needs of multigrade teaching for teacher training programmes.

### 4.8.2 Training policies for multigrade teaching

In order to investigate the interaction between the policies and practice of multigrade teaching, training policies applied in the research area are studied. Using document analysis of the training material, the core elements of the training, including its objectives and the key targets of multigrade teaching, are identified (Chapter 8). These training messages are used as key indicators to evaluate the training.

### 4.8.3 Evaluation of the training

First, the quality and characteristics of training inputs are assessed. The quality of the training material is analysed in terms of its contents, structure, style and volume balance. The characteristics of the trainers – with regard to multigrade teaching – and the structure and activities of the training are compared. This is done for all the different training levels, which allows the identification of disjunctions in the training process. The characteristics of the trainees are investigated through questionnaires.

Second, RCT training for teachers is documented: its activities, time allocation and coverage of training material. This gives a visualisation of what really happens during the sessions (Chapter 9).

Third, the impact of the training is assessed in terms of knowledge acquired, competence and performance (Chapter 10). The knowledge acquired is assessed using the self-evaluation forms completed by the trainees. Initially, the self-evaluation forms were intended to obtain an evaluation of the training from the trainees themselves. However it became clear that the trainees filled in the forms with the 'right answers'. It seems in fact that they did not have a notion of criticising the training offered to them. Thus the replies are finally treated as a measure for the knowledge acquired during training. They are assessed using the core elements of the training policies identified in Chapter Eight. If the answers accord with training policies, the training messages were judged as successfully transmitted.

Fourth, the competence acquired is assessed using a 'competency-performance approach' based on the US American teacher education movement (Magoon, 1976, cited in Dove, 1986), was used. It aims at assessing what the trainee-teachers actually do in the classroom, not only what they have learned (Dove, 1986). The sessions of practice teaching observed during the training course are analysed and used as an indicator to measure the ability of the trainees to convert their knowledge into actions – in a simulated teaching situation. If actions were in accordance with training policies, the trainees were judged as competent.

Finally, the performance of selected trainees is assessed through class observation in their own schools. The classroom activities of the trainees before and after the training are compared in order to detect change and innovation. If their action in the classroom was in accordance with training policies, the training messages were judged as acquired. The degree of improvement in teacher performance is visualised using the ladder of multigrade teaching defined in Chapter Six. As the number of trainees selected is limited, the results were cross-checked against data from the focus group discussions.

### 4.8.4 Underlying causes of training results

The causes of training results are discussed with regard to both the practice of teaching and the training policies (Chapter 10). All data collected and analysed in this study is brought together to provide a general view of multigrade teaching. Based on what has been identified

as the underlying causes of the training results, recommendations are made for the improvement of the present training innovations and for further future research.

## 4.9 Ethical issues

*Informed consent*

Consent should be obtained from all those who assist in the research, as well as from others in relevant institutions or organisations (Choen et al., 2000: 50). For this study, consent was obtained from education officers, resource persons, headmasters/headmistresses as well as teachers, because they were directly involved in my research through interviews, observation and questionnaires. On the first day of each visit to the districts of the field study, I spent the whole day in the DEO to report on my present research situation and to inform personnel of the activities planned. I also provided a copy of questionnaires and other related documents to officers and resource persons. When I interviewed headmasters/headmistresses and teachers, I showed the certificate from CERID. Both I and the resource person explained my research and my activities to all interviewees. I introduced myself and personally asked for the consent of each interviewee before interviewing. Unless the interviewee gave his/her consent, I did not do any research in his/her class.

The notion of informed consent may be misleading however where power relationships are involved. Not everybody has the power to refuse participation, even if they are asked for their consent (Bentall, 2002). Although I personally asked all interviewees for their consent, I was generally accompanied by their resource persons and headmaster/headmistresses. This problem was tackled intuitively by observing facial expressions and other non-verbal communication of potential participants. Thus their unwillingness or hesitance was ascertained.

Although Fine and Standstrom (1988; 31-32) recommend obtaining consent from students and parents as well, these categories were not systematically consulted for this study, because they are not direct subject of investigation. The judgement whether their consent is necessary was left to headmasters/headmistresses, and generally depends on the relationship between each school and its students and community. When consent by the community was judged to

be necessary, the certificate from CERID was shown to members of the school management committee, accompanied by some oral explanation.

*Ethical concerns about research tools*

Ethical issues may arise because of certain research methods (Choen et al., 2000: 49). In order to respect their voluntary participation and to protect participants who filled in questionnaires and self-evaluation forms, their names are not published (Appendix 4, 5). To make this confidentiality explicit, the forms clearly state that they will be used only for academic purposes (Appendix 4, 5). 'Certain kinds of information are more personal than others and may be more threatening' (Choen et al., 2000: 61). All questions used in interviews and on written self-evaluation forms were strictly examined, and only those absolutely necessary for addressing the research questions and not aggressive towards participants were selected. Potentially useful information which is not directly linked to my research questions was not gathered.

*Privacy protection and publication*

The privacy of the participants and their sensitivity concerning the potentially threatening impact of the research on them should be take into account (Choen et al., 2000: 61). Schools are referred to under pseudonyms so that they cannot be identified. In order to protect individuals, their names are coded into serial numbers and only attached to the districts which they belong to. Data on individuals was only used to produce categorisations – except for some specific comments. This data is reported in the form of micro-aggregation, describing 'average persons' rather than 'specific individuals.'

## 4.10 Limitations and challenges

### 4.10.1 Being an outsider: weakness and strength

Outsider in the context of this research means 'people concerned with rural development who are themselves neither rural nor poor' (Chambers, 1983). This study has been conducted by an urban Japanese in rural Nepal. Because it has been conducted by an outsider, the study has several limitations. Bias and misleading interpretations caused by the outsider's subjectivity and background are inevitable, although an attempt has been made to minimise this through

living in Nepal for 20 months and spending as great amount of time as possible in the field, aiming for flexibility and using multiple and multilevel methods carefully designed to avoid misleading interpretations and misjudgement.

At the same time, being an outsider has some advantages. For example Cummings (1996a and b) identified some components which insiders cannot understand about a society, because they are too close and the phenomena are too natural to an insider.[4] Additionally, the insider is so attached to the society, involved in social power relations, that he/she does not behave as freely as an outsider. Of course the abilities of the outsider also limit the results of the research to a certain extent. However, once a model is created, the insider can easily contribute amendments. The greatest advantage of the outsider is the discovery of unrealised factors. Since multigrade teaching has not been studied too much, the role of the outsider is still significant.

In this study, the advantages of being an outsider have been exploited to a maximum and the weaknesses avoided as far as possible. The next sub-section presents the special efforts made to confront one of the most significant weaknesses of an outsider, the limitations of language.

### 4.10.2 Language issues: visual indicators, back-translation and field pre-test

Ignorance of the language is one of the most significant limitations facing a foreign researcher. Foreigners have to rely on interpreters and translators, but those bilinguals are often urban-based, qualified professionals with all the arrogance of a superior status and the ignorance of rural realities, so that their responses are often misleading and distorted (Chambers, 1983). The research methods in this study have been designed to use non-linguistic as well as linguistic tools. The main research method of this study is observation and the use of visual indicators including time scales, teacher actions and behaviour, measuring rather pages and exercise numbers in textbooks than relying on what is said by teachers.

[4] Cummings (1996a and b), a US American researcher, has proposed an Asian/Japan model of educational development, based on his field research in Japan.

Interviews with officers, training trainers and academics have been conducted mainly in English. Interpreters assisted with teacher interviews during the initial series of school visits and the final series of school visits in the evaluation phase. Here the use of the Nepalese language is indispensable for the research. The teacher interviews are systematically structured in order to minimise misleading questions and the production of biased responses. The structured interview checklist (see 4.4.3) has been pre-tested with five teachers in Kavre district.

Questionnaires and evaluation forms have originally been written in English and translated to Nepalese. In order to decrease the limitations of language, back-translation has been employed. Back-translation can help to check and control the quality of the translations and questionnaires required for meaningful research (Brislin et al., 1973). The original English questionnaires and evaluation forms have been translated into Nepalese by an educational researcher. The translated version has been back-translated into English by another researcher. The two English versions have subsequently been compared by the researcher to determine discrepancies. In the case of discrepancies a third Nepalese researcher has been consulted to determine the final wording.

One of the criticisms levelled against back-translation is that the researchers have too much faith in it and exclusively rely on back-translation. Therefore Brislin et al. (1973) recommends the use of multiple methods, including pre-test in the field. Hence the back-translated questionnaires for this study have been pre-tested in three multigrade schools in Nuwakot district. Back-translated evaluation forms have been pre-tested with the DTOT in Kavre district. After questionnaires and evaluation forms had been filled in by multigrade teachers and DTOT trainees, their comments and understanding of the questions has been discussed. The answers were translated into English to investigate the understanding of the respondents. Errors and confusions have been marked by the researcher and another researcher has been consulted to revise the final version of the questionnaires.

# Chapter Five
# Current Conditions of Multigrade Primary Schools in Nepal

This chapter and the next present the current practice of multigrade teaching in Nepal. This chapter describes the current conditions of multigrade schools, as emerging from the case studies conducted using the methods presented in the previous chapter. The first section presents contextual information for the selected districts. The second section describes the characteristics of the schools visited.

## 5.1 District profile

### 5.1.1 Central department of the hill region

The two districts selected for this study are located in the Central department of the hill region. Among the five administrative departments of Nepal, Central is the most economically developed area (Inoue, 1996). The two districts selected – Nuwakot and Kavre- are located on the outskirts of Kathmandu valley. In Chapter Three, it was noted that the primary teacher to school ratio of Central department of the hill region is the lowest in Nepal (see Table 3-6). However, within the region, there is wide variation between districts. Table 5-1 indicates that Makawanpur district has a ratio of 4.2, while Nuwakot and Kavre districts have ratios of 2.8 and 2.6 respectively.

Table 5-1 Primary teacher-school ratios in Central department of the hill region (1998)


Source: MOES, 2000a

### 5.1.2 Nuwakot district

Nuwakot district is located north of Kathmandu. The administrative centre of the district is Bidur with a population of 18,694 (1991). Trisli and Battar are the main market towns. There is a surfaced road between Trisli and Kathmandu.[1] However, an outcrop of the Himalayan range protrudes between the two localities so that the road twists through the valley. It takes approximately four hours to reach Trisli from Kathmandu by bus.

The total population of the district was 245,260 in 1991 and was estimated at 306,377 in 2000. According to the census of 1991, land area is 1,121 sq. kms, and the density of population is 218.8 per sq. km. The economically active population, age 10 and above, is 45.59% (1991), of whom 90.9% are farmers or fishermen (HMG, 2001). Major agricultural products are rice, wheat, maize, millet, sugarcane, oilseed and potatoes (Table 5-2).

Table 5-2 Estimated crop production in 1999 (m. tons)

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Source: HMG, 2001

The Tamang ethnic group represents the largest individual group within the population of Nuwakot district. The Tamang represent 38% of the total population, followed by the Brahman (hill) with 22%, the Chhetri with 14%, the Newar with 8%, the Kami with 3.2%, the Rai with 3% and the Sarki with 1.4% (all figures 1991 census). As many Tamang are Buddhist, the overall percentage of Buddhists is a relatively high 36%, the rest of the population are 64% Hindu and 0.1% Muslim. Although the Tamang are a large group among the various ethnic groupings (3.1.1), their status in the social hierarchy is lower than that of many other groups, including the Brahman, Chhetri and Newar (Hofer, 1981: 6; Peters, 1998: 23).[2] The Tamang, are of Tibetan origin and maintain a unique, isolated culture, but those

[1] Trisli is located 75 kilometres north of Kathmandu.

[2] The Tamang were characterised as 'enslavable alcohol-drinker' in 1854 (Hofer, 1979: 141). Turner (1927: 65-66) ranks the Tamang as the second lowest, after the Tharu, among ethnic groups. In 1955 discrimination according to ethnicity was prohibited and the rank of the Tamang is not longer based on an explicit consensus (Hofer, 1979: 215). However, Furer-Haimerndorf (1978:15) writes that the Tamang are superior only to untouchables in the caste hierarchy. In this study, none of the 47 interviewed teachers (27 in Nuwakot district and 20 in Kavre district) were Tamang, while there were many Tamang students in the schools visited (Figure 3-4). In the analysis of Tamura (1996: 121) the Tamang are seen as generally temperate and not ambitious to

settled in the Kathmandu valley are much affected by the national culture (Fricke, 1984: 30). The mother tongue of the majority (59%) of the district population is Nepalese, followed by 35% of Tamang and 4% of Newari speakers (1991). In 1991 the literacy rate of the population of age 6 and above was 31.7% (male 45.4%, female 18.4%). This is slightly lower than the national average of 39.9% (3.1.1).

### 5.1.3 Kavre district

Kavre district is located east of Kathmandu. Of the three municipalities in the district, Dhulikhel has a population of 9,812, Banepa a population of 12,537 and Panauti a population of 20,467 (1991). The main market town is Banepa. There is a surfaced road between Dhulikhel, Panauti and Kathmandu via Banepa.[3] There is a lot of public transport and it takes approximately two hours by bus to reach Dhulikhel from Kathmandu.

The total population of the district was 324,329 in 1991. According to the census of 1991, the land area is 1,396 sq. kms with a density of population of 232.3 per sq. km. The economically active population of age 10 and above is 45.85% (1991). Of which 89.18% are farmers or fishermen (HMG, 2001). Major agricultural products are rice, wheat, maize, millet, barley, sugarcane, oilseed and potatoes (Table 5-2).

In Kavre district, too, the Tamang are the largest single group. In 1991, the Tamang represented 41%, the Brahman (hill) 24%, the Chhetri 13%, the Newar 14%, the Kami 2.2% and the Sarki 1.6%. Following this break-down of the population, 33% of the inhabitants of Kavre district are Buddhist, against 66% of Hindu. The mother tongue of 53% of the population is Nepalese, followed by 32% of Tamang and 12% of Newari speakers (1991 figures). In 1991 the literacy rate of population aged 6 and above was 39.23%. This is nearly the same as the national average of 39.9%.

### 5.1.4 Primary educational context in the two districts

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compete against higher castes – unlike the Gurung and the Kirati. Consequently they are considered as lower in the caste hierarchy and often exploited.

[3] Dhulikhel is located 35 kilometres east of Kathmandu.

The most significant factor which differentiates the educational conditions in Nepal is the implementation of BPEP. Nuwakot has been supported by BPEP since 1992, while Kavre was included in the project only in 1997. However, general conditions with regard to primary education in the two districts are similar, apart from the extremely low primary survival rate in Nuwakot (Table 5-3).

Table 5-3 Primary educational indicators in Nuwakot and Kavre districts


Source: MOE, 1998; MOES, 2000a; DEO Nuwakot, 2000a, 2000b; DEO Kavre, 2000, 2001

In Nuwakot, there were 495 schools having a primary level, 96 lower secondary schools and 57 secondary schools in 1998 (HMG, 2001). There are 17 Resource Centres (RCs). The GER in primary schools is 137% (male 150%, female 123%) with the NER of 84% (male 91%, female 77%). The graduation rate in primary schools in 2000 stands at only 18.53 % (male 18.08 %, female 19.17 %) (DEO Nuwakot, 2000a). Although enrolment rates are higher than the national average, the survival rate in Nuwakot is low, 18.53%.

In Kavre, there were 580 schools having a primary level, 194 lower secondary schools and 72 secondary schools in 1998 (HMG, 2001). There are 33 RCs. The GER in primary schools in 2000 was 151.1% (male 144.5%, female 137.5%) with the NER of 92.4% (male 93.4%, female 94.4%), and a survival rate to Grade 5 of only 51.5% (male 53.0 %, female 49.8 %) (DEO Kavre, 2000). Enrolment rates are higher than the national average, but the survival rate is still low at only half of the enrolment.

### 5.1.5 Multigrade teaching in the two districts

There are many multigrade schools in both districts (Table 5-4). In Nuwakot in 2000, approximately 95% of public primary schools are multigrade schools. There are 495 schools with a primary level in Nuwakot (DEO Nuwakot, 2000a). Out of these 495 schools, 336 are public primary schools. Out of 336 schools, only 17 have one teacher for each grade (DEO Nuwakot, 2000b). This data indicates that there are fewer teachers than grades, implying that

teachers are expected to teach across several grades in 319 schools, or 94.66% of public primary schools in Nuwakot.

Table 5-4 Multigrade primary schools in Nuwakot and Kavre districts

TABLE REDACTED DUE TO THIRD PARTY RIGHTS OR OTHER LEGAL ISSUES

Source: calculated from DEO Nuwakot, 2000a, 2000b; DEO Kavre, 2001

In Kavre in 2001, 84.71% of public primary schools are multigrade schools. There are 580 schools with a primary level in Kavre (HMG, 2001). Out of 580 schools, 327 schools are public primary schools. Out of these 327 public primary schools, only 50 have more than five teachers (DEO Kavre, 2001). This data indicates that there are fewer teachers than grades, implying that teachers are expected to teach across several grades in 277 schools, or 84.71% of public primary schools in Kavre.

There is a prevalence of multigrade teaching in both districts, but the implementation of BPEP affects multigrade teaching in the two districts. The implementation of the project differentiates the two districts in terms of classroom condition, teacher training and the system of school supervision.

In Nuwakot, the number of primary schools was 95 in 1973 and 367 in 1991. BPEP has supported the district since 1992 and the number of schools has risen to 495 in 1998/99 (DEO Nuwakot, 2000a). BPEP has been constructing classrooms to accommodate all grades of the primary level. Therefore, there are a sufficient number of classrooms in Nuwakot.

Kavre has expanded primary education in the same way as Nuwakot during the same period. The number of primary schools in Kavre has risen from 312 in 1989 to 580 in 1998. However, as Kavre has not been included in BPEP until 1997, schools have often been constructed by the community with limited resources. Therefore, the quality of the school buildings differs from community to community, and small schools tend to have fewer classrooms than the number of grades in the school.

Additionally, in Kavre, the percentage of urban schools is as high as 15.12%. Because the district is located near Kathmandu, its urban areas are similar to Kathmandu and provide high quality education. This accelerates the differentiation in the quality of schools between urban and rural areas in the district. Although 50 primary schools are monograde schools, 18 of these monograde schools are located in the three municipalities. Of the 33 RCs in the district 8 RC have only multigrade schools. The difference between urban and rural schools tends to be important.

Another effect of BPEP is found in teacher training. The number of primary school teachers is 1,465 in Nuwakot and 1,868 in Kavre (1998). Table 5-5 indicates that the majority of primary teachers have passed SLC in both districts and some teachers have higher academic qualifications. Although the academic qualification of primary teachers is similar in the two districts, the availability of in-service teacher training is different. Teachers in Nuwakot have had the opportunity to receive in-service teacher training by BPEP since 1992, while a very limited number of teacher has received in-service training in Kavre before 1997.

Table5-5 Primary teacher qualification in Nuwakot and Kavre districts (%/1998)

TABLE REDACTED DUE TO THIRD PARTY RIGHTS OR OTHER LEGAL ISSUES

Source: MOES, 2000a

In Nuwakot, BPEP has constantly provided various types of long and short in-service training for teachers. Short-term in-service multigrade teacher training has been provided since 1993/94 (Table 5-6). The DEO of Nuwakot plans for all primary teachers in Nuwakot to receive multigrade teacher training in 1999 and 2000. In Kavre, in-service multigrade teacher training was conducted for the first time in 2000/01.

Table 5-6 Number of teachers receiving in-service multigrade teacher training

| | 1992/93 | 1993/94 | 1994/95 | 1995/96 | 1996/97 | 1997/98 | 1998/99 | 1999/00 | 2000/01 |
|---|---|---|---|---|---|---|---|---|---|
| Nepal | 140 | 1,406 | 556 | 583 | 292 | 866 | n/a | 10,129* | 6,888* |
| Nuwakot | 0 | 147 | 25 | 25 | 20 | 20 | n/a | 705* | 260* |
| Kavre | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 730* |

Source: BPEP, 1998; DEO Nuwakot, 2000b; DOE, 1999
Note: * estimated figures

Additionally, the system of supervision is different for the two districts. In Nuwakot, BPEP has promoted a supervision system with the school cluster. Thus RCs and Resource Persons exist in a systematic way. In the 17 RCs of Nuwakot district, School Supervisors have been allocated to the most remote areas, giving them greater responsibility, and Resource Persons nearer towns fall under the direct supervision of the DEO.

By contrast, in Kavre, school cluster have only been introduced after it became part of BPEP. Therefore, RCs have only recently been established and Resource Persons are gradually nominated. Thirty-three Resource Persons have been allocated to the 33 RCs in Kavre district and School Supervisors supervise the Resource Persons.

## 5.2 Multigrade primary school characteristics[4]

In Nuwakot district, the following eight multigrade primary schools have been visited for half a day each. (1) Shiva primary school, (2) Shakti primary school, (3) Kali primary school, (4) Durga primary school, (5) Parvati primary school, (6) Ganesha primary school, (7) Kartik primary school, and (8) Buddha primary school.

In Kavre district, the following six multigrade primary schools have been visited for half a day each. (A) Brahma primary school, (B) Saraswati primary school, (C) Vishnu primary school, (D) Lakshimi primary school, (E) Rama primary school and (F) Krishna primary school.

### 5.2.1 Location and size of schools

Tables 5-7 and 5-8 indicate how long it takes on foot to get to the schools from the nearest town, and how many grade levels, students and teachers the schools maintain. This allows to identify the schools by location and size.

[4] All the names of the schools included in this study have been changed.

Table5-7 Location and size of case study schools in Nuwakot district

| SN | Nuwakot district | Distance from town* | | Number of students | | | Number of teachers | | |
|---|---|---|---|---|---|---|---|---|---|
| | Schools | (minutes) | Grades | Total | Male | Female | Total | Male | Female |
| 1 | Shiva | 15-20 | G1-5 | 70 | 33 | 37 | 4 | 2 | 2 |
| 2 | Shakti | 60 | KG-G5 | 111 | 48 | 62 | 3 | 1 | 2 |
| 3 | Kali | 45 | G1-5 | 87 | 46 | 41 | 4 | 3 | 1 |
| 4 | Durga | 20 | G1-5 | 74 | 35 | 39 | 2 | 1 | 1 |
| 5 | Parvati | 30 | G1-5 | 73 | 31 | 42 | 4 | 2 | 2 |
| 6 | Ganesha | 25-30 | G1-5 | 84 | 38 | 46 | 3 | 2 | 1 |
| 7 | Kartik | 20-25 | G1-5 | 142 | 72 | 70 | 4 | 3 | 1 |
| 8 | Buddha | 90 | G1-5 | 147 | 84 | 63 | 3 | 3 | 0 |

Note: * on foot

The distance of schools from the nearest town varies between a 15 and a 90-minute walk. This indicates that there are multigrade schools not only in remote areas but also near towns. In fact, the nearest town in the case of some schools can be even the largest town or a main municipality of the district. Shiva primary school for example is located 15 to 20 minutes from Trisli. Durga primary school and Ganesha primary school are located 20 to 30 minutes from Battar. Brahma primary school is located 15 minutes from Banepa municipality. Lakshimi primary school is located 30 minutes from Panauthi municipality. Thus multigrade primary schools are located in urban as well as in remote areas.

Table 5-8 Location and size of case study schools in Kavre district

| SN | Kavre distdict | Distance from town | | Number of students | | | Number of teachers | | |
|---|---|---|---|---|---|---|---|---|---|
| | Schools | (minutes) | Grades | Total | Male | Female | Total | Male | Female |
| A | Brahma | 15 | G1-5 | 61 | 29 | 32 | 2 | 2 | 0 |
| B | Saraswati | 60 | G1-5 | 137 | 64 | 73 | 4 | 3 | 1 |
| C | Vishnu | 30-45 | G1-5 | 160 | 81 | 79 | 4 | 3 | 1 |
| D | Lakshimi | 30 | G1-5 | 116 | 58 | 58 | 4 | 2 | 2 |
| E | Rama | 60 | G1-5 | 91 | 44 | 47 | 2 | 2 | 0 |
| F | Krishna | 60 | G1-5 | 69 | 20 | 49 | 4 | 3 | 1 |

Note: * on foot

Concerning school size, all schools comprise five grades. One school has also a kindergarten, but the small children are kept in the same classroom with Grade1. The number of students varies from 61 to 160 students. The size of the school varies, but all schools are considered to be small schools in the context of the Nepalese education system. This is because none of

them reaches the number of students necessary for the allocation of five teachers. The teacher-student ratio set by the government for the hill areas is 1:35. Thus a minimum number of 175 students per school is required in order to obtain the allocation of 5 teachers. As a result, only 2 to 4 teachers are allocated to each school. However, the number of teachers is not strictly proportionate to the number of students in every case. This can be explained by frequent teacher movements and indeed thousands of individual reasons.[5]

### 5.2.2 Physical facilities

Table 5-9 Physical facilities of the case study schools in Nuwakot district

| SN | Nuwakot district | | | | | Other facilities | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Schools | Number of classrooms | Offices | Blackboards | Benches and desks | Water | Electricity | Telephone | Toilets |
| 1 | Shiva | 5 | √ | √ | √ | | | | |
| 2 | Shakti | 5 | √ | √ | √ | √ | | | 2 |
| 3 | Kali | 5 (office +Grade5) | | √ | √ | √ | | | |
| 4 | Durga | 5 | √ | √ | √ | | | | |
| 5 | Parvati | 5 | √ | √ | √ | | | | for staff |
| 6 | Ganesha | 5 | √ | √ | √ | | | | |
| 7 | Kartik | 5 | √ | √ | √ | | | | 2 |
| 8 | Buddha | 5 | √ | √ | √ | | | | |

Even though the number of teachers is low, there are sufficient classrooms in Nuwakot district. All eight schools in fact have five classrooms (Table 5-9). The physical conditions between schools near a town and schools on the top of the mountains or hills do not differ much. Although facilities such as water, electricity, telephone and toilets are lacking, all schools have enough classrooms, with a blackboard in each classroom, and plenty of benches and desks in good condition. All schools have long wooden benches attached with iron bars

[5] For example, Durga primary school and Parvati primary school have the same number of students, but the former has 2 teachers, while the latter has 4 teachers. In Durga primary school, there had been another female teacher until some time ago, but she took maternity leave. After the end of her leave, she did not return to the school, but did also not resign her job. Thus a new teacher cannot be allocated. This situation has been continuing for over a year. On the other hand, in the case of Parvati primary school it is thought that the number of teachers is excessive and the education officers tries to take one teacher away from the school. However, all teachers working there live near the school, and none of them wants to move away from the school. Long discussions and negotiations have been ensuing. Another example is the case of Brahma primary school. There had been 4 teachers, but recently, because of the poor physical conditions and the low prestige of the school, two teachers have simultaneously moved to urban schools. The teachers have negotiated their move with the supervisory authorities, without any arrangement for replacement in the school.

to long wooden desks which can accommodate around five students. Private water supply is not always available within the school compound, but all schools have access to drinking water nearby. Students collect water and keep it in a water jar in school. Toilets are also not always available in the schools. Children often use the back yard, hills and forests.

Table 5-10 Physical facilities of the case study schools in Kavre district

| SN | Kavre district | | | | | Other facilities | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Schools | Number of classrooms | Offices | Blackboards | Benches and desks | Water | Electricity | Telephone | Toilets |
| A | Brahma | 4 | √ | √ | benches for G3,4,5 and mats for G1,2 | √ | | | |
| B | Saraswati | 5 | √ | √ | √ | | | | 2 |
| C | Vishnu | 5 | √ | √ | √ | | | | 3 |
| D | Lakshimi | 5 | √ | √ | √ | √ | | | 2 |
| E | Rama | 3 | √ | √ | √ | | | | 2 |
| F | Krishna | 2 | | √ | √ | | | | 2 |

In Kavre district, school conditions differ from school to school. The majority of schools have five classrooms, but some schools have less. Some have old style school buildings which look like an ordinary house, i. e. the building are relatively small. Krishna primary school does not have windows and doors. Educational facilities such as blackboards, benches and tables are not in a good condition when compared to the schools of Nuwakot district. The school furniture is of the same type of wooden benches and desks, but their condition is not always good, and the amount of school furniture is also not always sufficient. Blackboards are sometimes much smaller than those seen in Nuwakot district. In Krishna primary school, Grade 4 and 5 students share one tiny blackboard. In Brahma primary school, Grade 1 and 2 students do not have benches and desks, they sit on rush mats and put their notebooks on the floor. The condition of the other physical facilities such as water and electricity supply is the same as in Nuwakot district. The schools keep a drinking water jar. Interestingly, there are more toilets available in Kavre district.

### 5.2.3 Community support

According to Bajracharya et al. (1998), education in Nepal was initially organised by the initiative of local communities, with the government in a supporting role. Since 1971,

decision-making has shifted from the community to the government, but the government still expects the community to support the schools financially, assisting with physical facilities and teaching material. Each district organises a District Education Committee, and each school organises a School Management Committee to support the school.

Table 5-12 shows that the community supports construction and maintenance of school facilities. This table was produced based on interviews with the headmaster and teachers in each school. However, community support can be estimated to be more important than what appears in the table. In Nuwakot district, BPEP has built a number of schools. Of the eight schools there, two schools with five classrooms have been built by BPEP. At the same time when BPEP invests in a school, it requires that funds are matched or a contribution in kind is made by the community. Therefore, even when BPEP has the initiative for the foundation of a school, the community contributes something.

BPEP has been making extra efforts for the construction of sufficient classrooms for all grades. When the community founds a school, initially with a limited number of classrooms, BPEP adds the extra classrooms to match the number of grades. For example, Kartik primary school was founded by the community with three classrooms. Eventually two classrooms were added by BPED.

Table 5-11 Community support for the case study schools in Nuwakot district

| SN | Nuwakot district | Community support | | | |
|---|---|---|---|---|---|
| | Schools | Construction | Maintenance | No support | Stationary |
| 1 | Shiva | | √ | | |
| 2 | Shakti | INGO | √ | | |
| 3 | Kali | BPEP | | √ | |
| 4 | Durga | BPEP | √ | | |
| 5 | Parvati | √ | | | INGO |
| 6 | Ganesha | | | √ | |
| 7 | Kartik | √* | √ | | |
| 8 | Buddha | √ | | | |

Note: * The school was established by the community and supported by BPEP later.

In Kavre district, as BPEP has not supported the district until 1997, the schools have mainly been constructed by the community. This accounts for the diversity in school conditions between schools. The condition of schools depends on the motivation and the available

resources of each community. At the same time, Table 5-12 indicates that the community tends to neglect the maintenance of the school buildings and their furniture. This is reflected in the relatively unpleasant condition of the school buildings and their furniture.

Table 5-12 Community support for the case study schools in Kavre district

| SN | Kavre district | community support | | | |
|---|---|---|---|---|---|
| | Schools | construction | maintenance | no support | stationary |
| A | Brahma | √ | | | |
| B | Saraswati | √ | | | |
| C | Vishnu | INGO | | | INGO |
| D | Lakshimi | √ | | | |
| E | Rama | √ | | | |
| F | Krishna | √ | | | |

Although the provision of teaching materials is the responsibility of the community, no community actually provides them. When the schools need teaching materials, they try to collect some money from the parents of the students and buy paper or whatever the school needs. Some schools have bought a globe, a ball, a rope, a musical instrument and so on.

One interesting feature of Nepalese education is the existence of a number of independent, small, INGO constructed and supported schools. Two different Japanese NGOs have constructed two of the schools in this study and yet more Japanese NGOs have donated stationary to two of the schools.

### 5.2.4 Curriculum and teaching materials

The schools provide education in line with the National Curriculum, although the emphasis on subjects differs from one school to another. The teaching language is Nepalese. In all schools, English is an optional subject from Grades 1 to 5. The mother tongue of more than 30% of the population in the two districts is Tamang, but Tamang is neither used as a medium of instruction nor taught as a subject.

Most students in the schools visited seem to have textbooks, notebooks and pencils. Textbooks and teacher guides for teachers are also generally available. Most schools in both districts have a Nepalese drum.

In Nuwakot district, the DEO provides a globe, a map of Nepal, a world map, and tables for alphabet and numbers for each school. Some schools are provided with some cards, bricks with letters, and posters. BPEP provides Whole School Approach training for some teachers to show them how to make teaching materials such as picture cards and cardholder pockets. The trainees make them during the training course and display them on the school wall. A Japanese INGO has distributed a story book to all primary schools in Nuwakot district. In comparison, the schools of Kavre district have not yet received any teaching material from DEO. Therefore, the schools rarely have any teaching materials.

Examining individual schools, Shakti primary school has a volleyball and skipping ropes, Parvati primary school has skipping ropes, and Rama primary school has a globe. Parvati primary school and Vishnu primary school have received some stationary donated by different Japanese INGOs. This includes pencils, notebooks, colour paint, pencil sharpeners, picture cards, games, and fake clocks.

### 5.2.5 Supervision

In Nuwakot district, the DEO requests all Resource Persons and School Supervisors to visit at least ten schools per month or to visit each school three times per year. The frequency of supervision by the Resource Persons in the eight schools is shown in Table 5-13. The table shows that the Resource Persons visit the schools as many times as requested by the DEO. Kartik primary school is visited most often. It is located on the way to other schools in the same RC area so that the Resource Person visits the school on his way there. Parvati primary school and Buddha primary school receive fewer visits because they are located far from the RC and transport is not available.

The DEO of Kavre district requires Resource Persons to visit schools at least once per month. In Kavre district, Resource Persons are still in the process of being recruited and assigned. There are already Resource Persons in the areas studied, but they have been assigned only recently. Nala RC has had a Resource Person since last year, Sanga RC has had one for only two months and Sunthan RC has had one for one month. It is therefore difficult to predict the future regular frequency of school supervision. The Resource Person of Nala RC has visited

her schools once a month during her first year and the other Resource Persons also have visited their schools at least once (Table 5-14). Prior to the assignment of Resource Persons, the supervisors had been supposed to supervise schools. However, Table 5-14 indicates that the schools hardly got any visits. The headmaster of Brahma primary school mentioned one visit over two or three years and the headmaster of Rama primary school said that the school has received only one visit six or seven years ago.

Table 5-13 Frequency of visits by Resource Persons in the case study schools in Nuwakot district

| SN | Nuwakot district schools | Resource Centre | Frequency of visits per year by Resource Persons |
|---|---|---|---|
| | requirement | | 3 |
| 1 | Shiva | Trishuli | 5 |
| 2 | Shakti | Trishuli | 2 to 3 |
| 3 | Kali | Trishuli | 3 |
| 4 | Durga | Trishuli | 3 |
| 5 | Parvati | Trishuli | 2 |
| 6 | Ganesha | Trishuli | 5 to 7 |
| 7 | Kartik | Charghare | 12 to 24 |
| 8 | Buddha | Charghare | 1 to 2 |

Table 5-14 Frequency of visits by Resource Persons in the case study schools in Kavre district

| SN | Kavre district schools | Resource Centre | Frequency of visits per month by Resource Persons | Frequency of visits by Supervisors |
|---|---|---|---|---|
| | Requirement | | one | |
| A | Brahma | Sanga | one, during the last two months | 1 during 2 to 3 years |
| B | Saraswati | Nala | one, during the last year | |
| C | Vishnu | Nala | one, during the last year | |
| D | Lakshimi | Sunthan | one, during the last two months | |
| E | Rama | Sunthan | one, during the last two months | one, 6-7 years ago |
| F | Krishna | Sunthan | one, during the last two months | |

### 5.2.6 School leadership

Tables 5-15 and 5-16 indicate that most headmasters and headmistresses are from the local area. This means they are familiar with the local society and culture. Among 14 headmasters

and headmistresses, only one headmaster was from another district. Most of them live relatively close to their school, i.e. within 30 minutes walking distance. The headmaster of Parvati primary school (SN 5) has to walk 60 minutes from his house to his school and the headmistresses of Shiva primary school (SN 1) has to walk 45 minutes.

The experience of headmasters and headmistresses ranges from 4 months to 15 years, but all of them have considerably more years of teaching experience. The teaching experience ranges from 5 to 29 years. Their qualification is quite high compared with the average of teacher qualification in the districts. Of the 14 headmasters and headmistresses, six have Intermediate certificates such as Intermediate of Arts (IA) and Intermediate of Education (IEd), which are equivalent to Grade 12 graduation certificates. The headmaster of Parvati primary school (SN 5) has obtained a Bachelor of Science (BSC) at Tribhuvan University.

Table 5-15 Characteristics of the headmasters and headmistress in Nuwakot district

| SN | Gender | Residence | Distance between home and school (minutes) | Teaching experience (years) | Headmaster experience (years) | Qualification | Basic primary training | Short-term modular training |
|---|---|---|---|---|---|---|---|---|
| 1 | female | same as origin | 45 | 13 | 7 | IA | 7.5 months | HM |
| 2 | female | same as origin | 30 | 7 | 4 | IA | 7.5 months | |
| 3 | male | same as origin | 25 | 11 | 11 | IA | 7.5 months | HM |
| 4 | male | same as origin | 30 | 7 | 4 months | SLC | 7.5 months | WSA, MGT |
| 5 | male | same as origin | 60 | 22 | 2 | BSC | | |
| 6 | male | same as origin | 10 | 12 | n/a | SLC | 5 months | HM, curriculum |
| 7 | male | same as origin | 10 | 16 | 12 | SLC | 7.5 months | HM, WSA, curriculum |
| 8 | male | Buddha (from Sapatari district) | 5 | 15 | 7 | IA | 7.5 month | HM, WSA, MGT, curriculum |

Note: SLC stands for School Leaving Certificate, IA for Intermediate of Arts, IEd for Intermediate of Education, BSC for Bachelor of Science, HM for HeadMaster training, WSA for Whole School Approach training, MGT for MultiGrade Teaching training and SIP for School Improvement Programme training.

All headmasters and headmistresses, except the headmaster of Parvati primary school (SN5), have undergone some kind of teacher training. Eleven headmasters and headmistresses have taken headmaster/headmistress training for school leadership during one month or 12 days. Twelve headmasters and headmistresses have taken the basic primary teacher training. One headmaster has completed the 10-month programme and others are still in the middle of the

programme. Since Nuwakot district has started providing training earlier than Kavre district, the headmasters and headmistresses of Nuwakot district tend to reach the advanced stages of training earlier than those of Kavre district.

Some of the headmasters and headmistresses have taken the short-term in-service training. Four headmasters have taken Whole School Approach training, two headmasters have taken Multigrade Teaching training and one headmaster has taken the School Improvement Programme training.

Table 5-16 Characteristics of the headmasters and headmistress in Kavre district

| SN | Gender | Residence | Distance between home and school (minutes) | Teaching experience (years) | Headmaster experience (years) | Qualification | Basic primary training | Short-term modular training |
|---|---|---|---|---|---|---|---|---|
| A | male | same as origin | 15 | 13 | 7 | SLC | 2.5 months | HM |
| B | female | same as origin | 20 | 18 | 5 | SLC | 5 months | HM |
| C | male | same as origin | 25 | 29 | 15 | IED | 10 months | HM, SIP |
| D | male | same as origin | 5 | 5 | 5 | SLC | | HM |
| E | male | same as origin | 20 | 10 | 10 | SLC | 5 months, | HM |
| F | male | same as origin | 30 | 9 | 3 | IA | 2.5 months | HM |

### 5.2.7 Teachers

Most of the teachers are from the local area. Two female teachers at Parvati primary school (SN 5) are from Kathmandu valley and have come to Nuwakot after their marriage. Tables 5-17 and 5-18 show that the distance from home to school ranges between 2 and 90 minutes. Two thirds of teachers live within 30 minutes walking distance.

Teachers have acquired relatively high qualifications. Tables 5-17 and 5-18 indicate that of the 33 teachers (19 teachers in Nuwakot and 14 teachers in Kavre district), 21 teachers have SLC, 11 teachers have Intermediate certificates, and one teacher has a Bachelor of Commerce form Tribhuvan University. Their teaching experience ranges from only 1 year to 20 years, but many teachers have indeed a long teaching experience. Ten teachers have less than 5 years of teaching experience but two thirds of the teachers have been teaching for more than 5 years.

Table 5-17 Teacher characteristics in Nuwakot district

| SN | Gender | Distance between home and school (minutes) | Qualification | Teaching experience (years) | Basic primary training | Short-term modular training |
|---|---|---|---|---|---|---|
| 1 | male | 5 | SLC | 11 | 7.5 months | MGT |
| 1 | male | 10 | IA | 3 | | WSA |
| 1 | female | 60 | IEd | 3 | | WSA |
| 2 | male | 20 | SLC | 7 | 2.5 months | MGT |
| 2 | female | 15 | IEd | 1 | | WSA |
| 3 | female | 60 | IA | 7 | 2.5 months | |
| 3 | male | 5 | SLC | 7 | 7.5 months | MGT, WSA |
| 3 | male | 5 | SLC | 9 | 7.5 months | MGT, WSA |
| 4 | female | 10 | ICOM | 6 | 2.5 months | |
| 5 | female | 60 | SLC | 8 | 2.5 months | |
| 5 | male | 60 | SLC | 13 | 7.5 months | curriculum |
| 5 | female | 60 | SLC | 15 | 7.5 months | MGT, curriculum |
| 6 | female | 30 | SLC | 6 | 2.5 months | MGT, curriculum |
| 6 | male | 10 | SLC | 9 | | MGT, curriculum, extra curricular |
| 7 | female | 10 | SLC | 7 | 2.5 months | MGT, WSA |
| 7 | male | 10 | SLC | 9 | 2.5 months | MGT, WSA, curriculum |
| 7 | male | 10 | IA | 10 | 7.5 months | |
| 8 | male | 2 | IEd | 3 | | MGT, WSA |
| 8 | male | 60 | SLC | 2 | | MGT, WSA |

Note on qualifications: SLC (School Leaving Certificate at Grade 10), IA (Intermediate of Art), IEd (Intermediate of Education), ICOM (Intermediate of Commerce).

Concerning qualification and teaching experience, there is no significant difference between the two districts. However, the availability of in-service teacher training varies. All teachers in Nuwakot district have received at least one type of teacher training. Among them, eleven teachers have taken Multigrade Teaching Training, nine teachers have taken Whole School Approach Training and five teachers have taken Curriculum Training. Concerning short-term modular training, Multigrade Teaching Training has been taken most often.

In Kavre district, teachers have not taken short-term modular training and some of the teachers have never received any teacher training at all. One teacher at Vishnu primary school (SNC) has received headmaster training for a month, because he was headmaster of another school until one year ago, but otherwise none of the teachers have had the occasion to take short-term modular teacher training. This reflects the time lag between the districts as

far as their support by BPEP is concerned. The teacher training programme has been promoted in Nuwakot district since 1992, but only since 1997 in Kavre district. Teacher training in the districts starts with headmaster training, and in Kavre has not yet reached the individual teachers.

Table 5-18 Teacher Characteristics in Kavre district

| SN | Gender | Distance between home and school (minutes) | Qualification | Teaching experience (years) | Ten-month training | Short-term modular training |
|---|---|---|---|---|---|---|
| A | male | 10 | ICOM | 2 | | |
| B | male | 50 | BCOM | 12 | 5 months | |
| B | male | 10 | SLC | 20 | 5 months | |
| B | male | 5 | SLC | 2 | | |
| C | male | 35 | SLC | 8 | 5 months | HM |
| C | male | 10 | SLC | 14 | | |
| C | female | 25 | IA | 15 | 5 months | |
| D | male | 30 | SLC | 10 | | |
| D | female | 10 | SLC | 4 | | |
| D | female | na | SLC | 2 | na | na |
| E | male | 20 | ICOM | 11 | 5 months | |
| F | male | 30 | SLC | 10 | 2.5 months | |
| F | male | 90 | ILaw | 4 | | |
| F | female | 5 | SLC | 9 | 5 months | |

Note on qualifications: ILaw (Intermediate of Law) and BCOM (Bachelor of Commerce).

### 5.2.8 Student attendance rates and academic achievement

Student attendance rates, such as repetition rates (Table 5-19) and dropout rates (Table 5-20), also 1999 test scores for district level examinations at Grade 5 (Table 5-21), are available only for Nuwakot district.

Table 5-19 Repetition rates in Nuwakot district (%)

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Source: DEO of Nuwakot, school records

Tables 5-19 and 5-20 show that the pattern of student attendance at the schools studied corresponds to the pattern at district level. There is a tendency of high repetition for Grade 1, about 15-20% repetition for Grade 2 and little repetition for the rest of the grades. Compared to national and district rates, Durga primary school (SN 4), Parvati primary school (SN 5) and Kartik primary school (SN 7) have lower rates of repetition for Grade 1. The high repetition rate for Grade 1 is caused mainly by an early age entrance. Children under the age of 6 also register for Grade 1 and repeat Grade 1 until they reach the 'right' age. Therefore, the repetition rate for Grade 1 is related to the number of small children registered. The high repetition rate for Grade 1 should hence not be overvalued.

Table 5-20 Dropout Rates in Nuwakot district (%)

| Grade | Nepal (1997) | Nuwakot (1999) | SN 1 (1998) | SN 2 (1999) | SN 3 (1999) | SN 4 (1999) | SN 5 (1999) | SN 6 (1999) | SN 7 (1999) | SN 8 (1999) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 19.2 | 12 | 7 | n/a | 20 | 19 | 29 | 13 | 19 | na |
| 2 | 4.8 | 0.9 | 16 | n/a | 11 | 0 | 12 | 6 | 4 | na |
| 3 | 4.1 | 0.9 | 4 | n/a | 9 | 27 | 0 | 0 | 0 | na |
| 4 | 11.2 | 0 | 7 | n/a | 15 | 21 | 15 | 7 | 8 | na |
| 5 | 18.6 | 0 | 1 | n/a | 0 | 0 | 0 | 0 | 4 | na |

In terms of dropout rate, most schools have rates close to the national average. The high dropout rates for Grade 1 at Parvati primary school (SN 5) indicate that Parvati primary school has a significant number of children who fail in Grade 1. The dropout rate gives as good approximation for children who really fail Grade 1. For the other grades the comparison

of repetition rates is difficult, because there is no standard test from Grade 1 to 4 and the criteria for repetition depend on each school. The dropout rates of Kali primary school (SN 3), Durga primary school (SN 4) and Parvati primary school (SN 5) remain constantly high until Grade 4.

Table 5-21 District Common Academic Test Score for Grade 5 in Nuwakot district (1999)

| | Nuwakot | Target | SN 1 | SN 2 | SN 3 | SN 4 | SN 5 | SN 6 | SN 7 | SN 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| Score (100) | 47 | 67 | 51.64 | n/a | 46.99 | 49.69 | 50.08 | 48.51 | 52.82 | 45.38 |
| Students | | | 11 | 16 | 16 | 15 | 14 | 11 | 26 | 14 |

Note: Nepali 100, English 100, mathematics 100, health education 50, skills 50, environment studies 100, social studies 100, optional subject 100, total 700.

Concerning academic achievement after Grade 5, the test scores of the schools studied are almost the same as (or better than) the average of the district. However, the high test scores of Durga primary school (SN 4) and Parvati primary school (SN 5) indicate that only a few students with high motivation have survived up to Grade 5.

## 5.3 Conclusion

This chapter illustrated the various features of multigrade primary schools in Nuwakot and Kavre district. Multigrade schools are prevalent in both districts, but the implementation of BPEP explains the different features of multigrade teaching in the two districts. Differences in terms of school facilities, teacher training and the system of school supervision can be observed. Since Nuwakot district has received support from BPEP for a longer time, the conditions with regard to multigrade teaching are better than in Kavre district and in many of the countries reviewed.

*Location of the multigrade primary schools visited*

Unlike the schools which have been reviewed in Chapter Two, the multigrade schools visited in Nepal are not located exclusively in remote areas, but are also found in urban areas (5.2.1). This means that the schools visited are distributed over a more varied area than those in the various countries they have been compared with, where multigrade schools are mostly located in remote and sparsely populated areas (2.4.1).

*Community support*

In Nepal, the community is expected to support the school as far as its physical facilities are concerned. The communities visited in both districts tend to construct the schools themselves (5.2.3). In Nuwakot district the communities are also involved in the maintenance of facilities. INGOs support three schools. By comparison, as it appears from the literature on this subject, gaining community support is difficult, for example in the Philippines, Zambia, Malaysia and India (2.4.6). Although it is difficult to compare the degree of support received in those countries with this study, it is clear that the schools visited in Nepal have at least the communities' interests and positive support.

*Physical facilities*

In Nuwakot district all the schools visited have more than five classrooms, while in Kavre district some schools have fewer classrooms. Since Nuwakot district has received constant support from BPEP, there is less diversity in the conditions of the buildings, and the number of classrooms normally corresponds to the number of grades (5.2.2). By contrast, the quality of facilities in Kavre district is diverse, depending on the availability of support from the community (5.2.3). As a result, in Kavre district some schools have five classrooms, while others have fewer classrooms than the number of grades in the school (5.2.2).

The furniture in all schools of both districts consists of heavy, long, wooden tables in rows, attached to benches (5.2.2). This is accordance with the situation in other countries like Mexico – as described in the relevant literature – and with previous studies in Nepal (2.5.3). However, this kind of furniture is not specifically designed for multigrade teaching – unlike for example the classroom furniture in Colombia (2.4.3).

*Curriculum and teaching material*

All schools follow the National Curriculum. The teaching language is Nepalese in all schools. English is taught as an optional subject in all schools. Students generally have textbooks, notebooks and pencils. Nuwakot district provides some additional teaching material, but Kavre district does not (5.2.4). Compared with the international situation, multigrade schools in Nuwakot district seem to be in a better condition than those in Kavre district and also those in many other reviewed countries (2.4.3). This is probably because Nuwakot district has received BPEP investment for a long time.

*Supervision*

In Nuwakot district, schools closer to the RC have more frequent visits by supervisors than schools farther away (5.2.5). This seems to be a common issue in the various countries, because many studies indicate that supervision in isolated areas is not successful (2.6.4).

*School leadership*

All headmasters and headmistresses, excepting one, come from the local area and thus are familiar with the local context (5.2.6). They have higher qualifications compared to the national average (3.1.6), and receive some form of in-service training, including Headmaster Training.

*Teachers*

Most teachers are again from the local area. This is considered a great advantage by the teachers interviewed in both districts. This is remarkable, because many of the countries reviewed have difficulties with recruiting teachers for remote areas because of their living conditions (2.4.4). Concerning the general quality of the teachers, it can be concluded that the teachers interviewed generally have higher qualifications than the national average (3.1.6). In Nuwakot district, a certain number of teachers have also received in-service training. In Kavre district, less teachers have received in-service training. Most importantly, no teacher in Kavre has received any modular training including Multigrade Teaching Training. The general quality of the teachers cannot be compared with other countries, because pre-service teacher training is not compulsory in Nepal, which is not the case in many other countries. What can be said however is that concerning multigrade teaching, the teachers in Nuwakot district are likely to have more occasions to receive special training than those in other countries (5.2.7; 2.6.2).

*School outputs*

In Nuwakot district, repetition and dropout rates in the schools studied are similar to the national and district average (5.2.8). Test scores for Grade 5 in the district examination are also close to the district average. Thus, student attendance rates and academic achievement in the schools visited are more or less representative of the average of the district.

# Chapter Six
# Current Practices in Multigrade Primary Classrooms in Nepal

The previous chapter described the characteristics of multigrade schools in Nuwakot and Kavre districts. This chapter presents multigrade classroom practice in the visited schools. The first section identifies the conditions in multigrade classrooms. The second section categorises the patterns of multigrade class organisation into five types. The third section explores the methods of multigrade teaching. The fourth section presents the problems identified by the researcher. The fifth section presents the problems identified by the teachers. The sixth section presents needs of multigrade classrooms, as identified by the teachers.

## 6.1 Multigrade primary classrooms

### 6.1.1 Classroom environment

In Nuwakot district, all schools visited have a sufficient number of classrooms for grades in the school. This means that the students of each grade are seated in a separate classroom. The teacher has to move between the different classrooms. In Kavre district, when the number of classrooms matches the number of grades in the school, the students are seated separately. When there are not sufficient classrooms, the students of different grades have to share the same classroom. In all cases the students sit in rows facing the blackboard.

### 6.1.2 Combination of grades and timetables

Among the 14 schools studied, Vishnu primary school (SNC) and Lakshimi primary school (SND) avoid multigrade teaching by recruiting an extra teacher from funds of the local community. This allows them to allocate one teacher to each grade. Therefore there are five teachers to teach in these two schools, although the number of government supported, 'official' teachers is less than five. Thus the two schools do not have to combine several grades. The rest of the 12 schools studied combine grades.

Table 6-1 Combination of grades in Nuwakot district

| SN | grades | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | KG+G1 | G1+G2 | G1+G2 +G3 | G1+G3 | G1+G4 | G1+G5 | G2+G3 | G2+G4 | G2+G5 | G3+G4 | G3+G5 | G4+G5 |
| 1 | | √ | | | | | √ | | | √ | | |
| 2 | √ | | | | | | | | √ | | | |
| 3 | | | | | √ | | | √ | √ | | √ | √ |
| 4 | | | √ | | | | | | | | | √ |
| 5 | | √ | | √ | | | | √ | √ | √ | | |
| 6 | | √ | | √ | | | √ | √ | √ | √ | √ | √ |
| 7 | | | | | | | √ | | | | | |
| 8 | | √ | | | √ | √ | √ | √ | | √ | | |

Note: School 1: Shiva, 2: Shakti, 3:Kali, 4: Durga, 5: Parvati, 6: Ganesha, 7: Kartik, 8: Buddha.

Table 6-2 Combination of grades in Kavre district

| SN | grades | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | G1+G2 | G1+G2+G4 | G1+G3 | G2+G3 | G2+G4 | G3+G4 | G3+G5 | G4+G5 |
| A | | √ | | | | | √ | |
| B | √ | | √ | √ | √ | √ | √ | |
| C | | | | | | | | |
| D | | | | | | | | |
| E | | | | √ | | | | √ |
| F | | | | | | | | √ |

Note: School A: Brahma, B: Saraswati, C: Vishnu, D: Lakshimi, E: Rama, F: Krishna.

Tables 6-1 and 6-2 show how they combine two or more grades. The combinations of grades differ from school to school; there are 12 different combinations. They are extremely diverse, but they all fall into two basic types.

In the first type, grades are combined at random, and the combinations vary between subjects and from one lesson to another. Grade combination is not fixed. Some schools have many combinations within the one school. Shiva primary school (SN 1) has three different combinations, Kali primary school (SN 3) and Parvati primary school (SN 5) have five, Ganesha primary school (SN 6) eight and Buddha primary school (SN 8) as well as Saraswati primary school (SN B) have six different combinations.

An example timetable for this type of combining grades is that of Parvati primary school (SN5), shown in Table 6-3. For example, for the first lesson period teacher C teaches Grades

3 and 4, for the second lesson period teacher A teaches Grades 1 and 2, and in the third lesson period teacher B teaches Grades 2 and 4. In this way, all grades experience multigrade teaching.

Table 6-3 Formal timetable for Parvati primary school (SN 5)

| lessons | 1 | 2 | 3 | 4 | Lunch | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| time | 10:15-11:00 | 11:00-11:45 | 11:45-12:30 | 12:30-1:15 | 1:15-2:00 | 2:00-2:40 | 2:40-3:20 | 3:20-4:00 |
| Grade 1 | A | A | C | B | | A | D | A |
| Grade 2 | B | A | B | C | | A | B | D |
| Grade 3 | C | B | A | D | | C | A | C |
| Grade 4 | C | D | B | D | | D | C | A |
| Grade 5 | D | C | D | A | | B | B | B |

Note: A, B, C and D indicate teachers.

In the second type, the combination pattern is fixed. The same combination is adopted for all subjects and lessons. Shakti primary school (SN 2), Durga primary school (SN 4), Kartik primary school (SN 7), Brahma primary school (SN A), Rama primary school (SN E) and Krishna primary school (SN F) use always the same pattern of combination. Tables 6-1 and 6-2 show that KG and Grade 1, Grades 2 and 5 are combined in Shakti primary school (SN 2). Grades 1, 2 and 3 on the one hand and Grades 4 and 5 on the other are combined in Durga primary school (SN 4). Grades 2 and 3 are combined in Kartik primary school (SN 7). Grades 1, 2 and 4, as well as Grades 3 and 5 are combined in Brahma primary school (SN A). Grades 2 and 3, as well as Grades 4 and 5 are combined in Rama primary school (SN E) and Grades 4 and 5 are combined in Krishna primary school (SN F).

The example timetable for this type of grade combination is that of Kartik primary school (SN 7) as shown in Table 6-4. In this timetable, only Grades 2 and 3 are combined in a multigrade class, the other grades are monograde.

Table 6-4 Formal timetable in Kartik primary school (SN 7),

| lessons | 1 | 2 | 3 | 4 | lunch | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|
| time | 10:15-11:00 | 11:00-11:45 | 11:45-12:30 | 12:30-1:15 | 1:15-2:00 | 2:00-2:40 | 2:40-3:20 | 3:20-4:00 |
| Grade 1 | A | D | C | B | | A | C | |
| **Grade 2** | **B** | **A** | **D** | **C** | | **C** | **A** | |
| **Grade 3** | **B** | **A** | **D** | **C** | | **C** | **A** | D |
| Grade 4 | C | B | A | D | | D | B | C |
| Grade 5 | D | C | B | A | | B | D | B |

Note: A, B, C and D indicate teachers.

The difference between the two types of combination of grades is due to differences in classroom conditions. In schools with the former type of combination, there are five classrooms in one single school building, thus it does not matter which classes are combined. In opposition, classroom conditions in the latter type of schools limit the possibilities of grade combination. For instance, in Durga primary school (SN 4) and Kartik primary school (SN 7), the classrooms for Grades 2 and 3 are located in one building and the classrooms for Grades 4 and 5 are located in another building. Therefore, when one teacher has to teach two classes at the same time, the teacher has to move between buildings in the school compound. To minimise movement, grades in classrooms near each other are combined. In the case of three schools in Kavre district, there are an insufficient number of classrooms to accommodate each grade separately. Therefore the students of two grades are seated in one classroom. The grades sharing a room are combined.

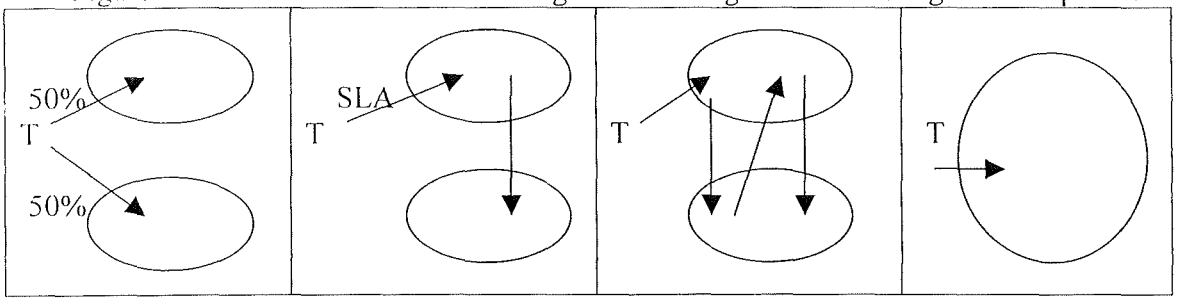
## 6.2 Five patterns of multigrade class organisation

In the longer observation, five different patterns of multigrade class organisation are identified. With the first pattern, teachers divide their whole teaching time during one day between the number of grades they have to cover, and teach each grade individually. This means that schools move from a multigrade arrangement to a monograde set-up so that multigrade teaching in the school becomes invisible.

With the other patterns multigrade teaching is more visible. The features of class organisation

there are visualised in Figure 6-1. With the second pattern, teachers divide the lesson period of a multigrade class into two equal time sections and teach each grade separately. With the third pattern, one class is considered the main class to be taught, and the other is treated as an additional class. In the additional class teachers assign Self-Learning Activity (SLA) during the first few minutes of the period, before going to teach the main class. The teacher concentrates on teaching in the main class. With the fourth pattern, teachers visit different classrooms frequently during one period. With pattern five, there is whole class teaching; in most schools this concerns only extra curricular subjects.

Figure 6-1 Pattern two to five of multigrade class organization during a lesson period




Pattern two | Pattern three | Pattern four | Pattern five

### 6.2.1 Pattern one: shifting from multigrade to monograde teaching in the whole school

Shakti primary school has a formal timetable similar to the one in Table 6-4. According to the timetable, each teacher is responsible for teaching four lesson periods in the morning.[1] In reality however, teachers divide their time into five to seven periods, depending on the number of classes they have to cover, and teach each grade individually, following the order of the formal timetable.

For example, according to the timetable, Teacher A is responsible for a multigrade class (Grades 2 and 5) during the first period, and a monograde class (Grade 3) for the second lesson period (Table 6-5). In reality, the teacher instead of teaching Grades 2 and 5 together for the first 45 minutes and Grade 3 for the following 45 minutes, teaches Grade 2 for the first 40 minutes, then Grade 5 for 33 minutes and finally Grade 3 for 22 minutes (Table 6-6). Since according to the timetable she is responsible for five lessons in the morning, she

[1] For this study only morning lessons are considered. This is despite of the fact that the schools operate 7 lesson periods in a day. Afternoon lessons are more ad-hoc and lesson periods are difficult to distinguish.

divides her morning teaching time into five time sections and teaches classes individually, as there were in fact five monograde classes.

Table 6-5 Theoretical morning lessons of Teachers A and B, timetable of Shakti primary school

| Lessons | 1 | 2 | 3 | 4 | Lunch |
|---|---|---|---|---|---|
| time | 10:15-11:00 | 11:00-11:45 | 11:45-12:30 | 12:30-1:15 | 1:15-2:00 |
| Grade1 | | | | | |
| Grade 2 | A | | | | |
| Grade3 | | A | | A | |
| Grade 4 | | | A | | |
| Grade 5 | A | | | | |

Note: A, and B indicate teachers.

Table 6-6 Actual practice of time allocation of Teacher A in Shakti primary school

| timetable | Lesson 1 10:15-11:00 | Lesson 2 11:00-11:45 | | Lesson 3 11:45-12:30 | Lesson 4 12:30-1:15 |
|---|---|---|---|---|---|
| | Grade 2+5 | Grade 3 | | Grade 4 | Grade 3 |
| KG | | | | | |
| G1 | | | | | |
| G2 | 40 minutes 10:24-11:04 | | | | |
| G3 | | | 22 minutes 11:37-11:59 | | 20 minutes 1:00-1:20 |
| G4 | | | | 43 minutes 12:17-1:00 | |
| G5 | | 33 minutes 11:04-11:37 | | | |

Note: Teacher A was in the office between 11:59 and 12:17

All this shows that the formal timetable is used as an indicator for the order of lessons, but does not represent the actual teaching responsibilities of teachers. By reducing the time for lessons from the formal 45 minutes to 12-40 minutes, the school produces extra lesson periods which cover the number of grades and thus tries to shift from a multigrade school to a monograde school.

However doing this, the students of each grade have to share the teachers' overall time in the school, because the teaching time of four teachers is not sufficient to fully cover the number of lessons for five grades. In order for four teachers to cover five grades instead of four, the

teachers sacrifice a part of the students' time in each grade.

According to the timetable, there are 180 minutes of lessons (45 minutes x 4 periods) in the morning. During these 180 minutes teachers spend most of their time teaching. For instance, on average during the longer case studies Teacher B spent 154 minutes and Teacher A 155 minutes teaching. However, all classes have to share the time of the teachers, which means that two classes always have to wait for their turn with a teacher. On average teachers spend about 25.5 minutes (155 minutes /6 grades) with each class every morning. Theoretically, each grade has lessons with a teacher for only about 102 minutes (25.5 minutes x 4 teachers) instead of 180 minutes.[2] In practice, during the longer case studies, Grade 5 students had only about 110 minutes with their teachers. In order to share the time of four teachers between five grades, each grade has considerable time during which it is not with a teacher.

Since the teachers do not consider their classes to be multigrade classes, and treat each class as a monograde class, they are never responsible for two or more classes at the same time. They are always responsible for only one grade at a time. Therefore, the teachers do not feel responsible for students who are not with any teacher. Consequently SLA is not given to students.

Teachers sometimes give the students homework at the end of their lesson. When homework is given to students, some students start working on their homework immediately after the teacher has left them; others do not. Thus the tasks assigned look like SLA. However, the assigned task is not meant to be done during the time students are alone in the classroom, but is meant to be done at home and to be completed for the same lesson the next day. Therefore, the teacher does not check the work of the students until the following day.

As teachers do not mind whether the students work during their waiting time or not, the activities of the students during the waiting periods depend on their own discipline and motivation. Some students if they wish to do so, or feel bored because there is nothing else to do, do their homework during their spare time in the classroom instead of doing it at home. If students do not feel like working on their homework, or are not given any homework, they simply wait until one of the teachers comes to their classroom for teaching. As a result, much

of their time is wasted. In other words, the school shifts from a multigrade to monograde arrangement by sacrificing part of the students' time in each grade.

### 6.2.2 Pattern two: dividing a lesson period equally into two time sections

In Krishna primary school the students of Grades 4 and 5 are seated in the same classroom. The students of Grade 4 are seated on the right hand side, Grade 5 students are on the left. As shown in Table 6-7, four teachers teach four groups of grades: Grades 1, 2, 3, and 4+5. In this school only Grades 4 and 5 receive multigrade teaching. Since the multigrade classroom situation is physically evident, teachers realise that they are responsible for two grades during one lesson period. However, their impression is that the two grades share the teacher's time as well as the classroom. Thus the teachers treat the two grades as two monograde classes in the same classroom.

Table 6-7 Formal timetable for Krishna primary school

| | lessons | 1 | 2 | 3 | 4 | lunch | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|
| classes | Time | 10:15-11:00 | 11:00-11:45 | 11:45-12:30 | 12:30-1:15 | 1:15-2:00 | 2:00-2:40 | 2:40-3:20 | 3:20-4:00 |
| monograde | Grade 1 | A | B | B | D | | A | C | D |
| monograde | Grade 2 | B | A | D | C | | B | A | C |
| monograde | Grade 3 | C | D | A | B | | C | D | B |
| multigrade | Grade 4 | D | C | C | A | | D | B | A |
| | Grade 5 | D | C | C | A | | D | B | A |

Note: A, B, C and D indicate teachers.

As there are four teachers, four groups, and four classrooms, the lesson periods follow the timetable. In the classroom for Grades 4 and 5, the teachers divides a 45-minute lesson period equally into two time sections and teaches each grade separately, one after the one. For instance, in the first period Teacher D enters the multigrade classroom and teaches Grade 4, neglecting Grade 5 and not giving any SLA. The students of Grade 5 are doing nothing, but simply wait for their turn. After the first 20 minutes, the teacher finishes the lesson for

[2] The KG class tends to be neglected, because it is not under the control of the MOE

Grade 4. Sometimes the teacher gives homework to Grade 4 at the end of the lesson. Then the teacher faces Grade 5 and starts their lesson. During this time, some students of Grade 4 start on their homework – if they have been given any. At the end of the lesson, the teacher sometimes gives homework to Grade 5. The teacher does not pay any attention to Grade 4, because the lesson for Grade 4 is considered to be over after 20 minutes. Table 6-8 shows an example of teaching shifts for three teachers.

Since the teachers do not recognise the fact that they are teaching two grades together, the teachers of this school also do not give any SLA. The teachers occasionally assign homework at the end of a lesson. Practically speaking this means that the first class taught may receive something to do for the second half of the lesson period, but the class taught second never gets any work to do during the first half of the lesson period. As the task given is homework, not SLA, doing the task during the second half of the lesson period is not obligatory. The way of spending waiting time totally depends on the self-discipline of the students. If they want to work, they read or copy books. If they do not want to work, they simply wait for their turn. The teacher does not check on the students' work, because the homework is given for correction on the next day.

Table 6-8 An example of time allocation for two grades, actions during one lesson

| | teachers (subjects) | A (environment) | | B (Social Studies) | | C (health) | |
|---|---|---|---|---|---|---|---|
| | grades | minutes | action | Minutes | action | minutes | action |
| Lesson 1 | Grade 4<br>Grade 5 | 22 | lesson<br>waiting | | | | |
| Lesson 2 | Grade 4<br>Grade 5 | | | 16 | waiting<br>lesson | | |
| | Grade 4<br>Grade 5 | | | 22 | lesson<br>homework | | |
| Lesson 3 | Grade 4<br>Grade 5 | | | | | 8 | waiting<br>lesson |
| | Grade 4<br>Grade 5 | | | | | 7 | lesson<br>homework |
| | total lesson | 22 | | 38 | | 15 | |

Thus Krishna primary school also shifts from multigrade teaching to monograde teaching, thereby sacrificing part of the time of students in Grades 4 and 5. Although Grades 1 to 3 receive the full attention of a teacher and benefit from monograde teaching, Grades 4 and 5

have half of their lesson time sacrificed. The disadvantage for Grades 4 and 5 is significant. When students of all grades share the time of teachers as with pattern one – without any follow-up for self-learning – the time on task of all students is affected a little. However, when only two grades share teacher time, without follow-up for self-learning, the impact on the time on task of those two grades is significant. They receive teaching only during 50% of their school hours.

### 6.2.3 Pattern three: teaching a main teaching class and a self learning class

In Kali primary school, one class is considered to be the main teaching class, the other an additional self-learning class. The teacher goes to the additional classroom for the first few minutes of a lesson period and sets SLA for the period. Then he/she goes to his main class. He/she concentrates on teaching directly for the main class.

For example, during the first period Grades 4 and 5 are multigrade classes taught by teacher C (Table 6-9). Grade 4 is the main class for the period, Grade 5 the additional class. Teacher C goes to Grade 5 first – for approximately ten minutes – and sets SLA. He then goes to the Grade 4 classroom to teach directly for the 30 minutes remaining. Grade 5 students are expected to complete the SLA during the first lesson period. This is a routine task for teachers in additional classes. Therefore, SLA is systematically given. The pattern is sustained and was observed constantly during the case studies.

Table 6-9 Allocation of teacher time in Kali primary school

| | 1 | 2 | 3 | 4 | Lunch | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|
| | 10:15-10:55 | 10:55-11:35 | 11:35-12:15 | 12:15-12:55 | 12:55-1:40 | 1:40-2:15 | 2:15-2:50 | 2:50-3:25 | 3:25-4:00 |
| G1 | D | B | C | A | | B | B | C | |
| G2 | B | A | D | C | | C | D | D | B |
| G3 | A | D | B | B | | A | C | A | A |
| G4 | C* | A | A | D | | B | D | B | C |
| G5 | C** | C | B | C | | D | A | A | D |

Note: * main class, ** additional class.

The content of SLA however is inadequate. Table 6-10 shows examples of SLA assigned at Kali primary school. When there are exercises in the textbooks, these exercises are given. However, many tasks are just copying the blackboard or textbooks or reciting passages of the

textbooks. Sometimes tasks were given just to fill the students' time in school.

Table 6-10 Content and amount of SLA assigned at Kali primary school

| day | grades | subjects | SLA | content and amount of SLA |
|---|---|---|---|---|
| 1 | 1 | Nepalese | o | copying the blackboard |
| | 2 | Nepalese | o | completing a table on the blackboard |
| 2 | 5 | S/S | o | 3 questions |
| | 4+5 | PE | x | whole class teaching |
| 3 | 5 | S/S | o | 1 question |
| | 2 | Nepalese | o | 5 problems from exercises in the textbook, p. 55 |
| | 2 | S/S | o | copy paragraphs of the textbook, p. 55 |
| | 2 | math | o | repeating after a student |

The amount of SLA is insufficient to cover one lesson period. When copying or reciting were assigned, students got bored and tired easily. When exercises were given, they included one to five questions. Students generally finished their tasks in a few minutes. For example, for a 31-minute lesson period in social studies, the teacher assigned one question for SLA, using the first eight minutes of the lesson period for instructions. Then he/she left for his main teaching class. Self-learning time was 23 minutes. All students finished their work within 14 minutes. The remaining nine minutes were wasted (Table 6-11).

Table 6-11 An example of SLA assigned at Kali primary school

| time | minutes | activities |
|---|---|---|
| 10:28-10:36 | 8 | Social studies: teacher assigns SLA (1 question) and goes to the main teaching class. |
| 10:36-10:59 | *23 | Until 10:44: all students read in their textbooks to find the answer, then they start writing down the answer in the notebooks. 60% of students have finished by 10:48, and all students have finished by 10:50. Students start chatting, walking around, and drinking water. |

Note: From field notes. *: self-learning time without teacher.

### 6.2.4 Pattern four: visiting each classroom frequently during a lesson period

In Durga primary school, two teachers teach two multigrade classes, Grades 1+2+3 and Grades 4–5, as shown in Table 6-12. Although there are two multigrade classes in the school, the students of each grade are seated individually in a separate classroom. The teachers teach the same subject for two or three grade groups at the same time in different classrooms. Since the combination of grades is fixed, teachers recognise that during one lesson period they are

responsible for two or three grades at the same time.

Table 6-12 Formal timetable for Durga primary school

| | lessons | 1 | 2 | 3 | 4 | lunch | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|---|---|
| classes | time | 10:15-11:00 | 11:00-11:45 | 11:45-12:30 | 12:30-1:15 | 1:15-2:00 | 2:00-2:40 | 2:40-3:20 | 3:20-4:00 |
| multigrade | Grade 1 | A | B | A | B | | A | B | |
| | Grade 2 | A | B | A | B | | A | B | |
| | Grade 3 | A | B | A | B | | A | B | |
| multigrade | Grade 4 | B | A | B | A | | B | A | B |
| | Grade 5 | B | A | B | A | | B | A | B |

Note: A and B indicate teachers.

Teacher B kept the students of the multigrade class occupied. Visiting two or three classrooms several times throughout a lesson period and giving SLA to the students. Table 6-13 shows that Teacher B made five visits to three grades during one lesson period, including two visits each to Grades 2 and 3. He spent the first five minutes in Grade 2, then five minutes in Grade 3, ten minutes in Grade 1, returned to Grade 2 for five minutes and spent the remaining six minutes with Grade 3. Since the teacher was aware of the fact that he was dealing with a multigrade class, SLA was given systematically and expected to be completed during the teacher's absence from the classroom.

Table 6-13 Movement of Teacher B in Durga primary school

| timetable | Lesson 1 10:15-11:00 | | Lesson 2 11:00-11:45 | | Lesson 3 11:45-12:30 | Lesson 4 12:30-1:15 |
|---|---|---|---|---|---|---|
| Grade 1 | | | (15 minutes) 14:05-14:20 | | | |
| Grade 2 | | | (5 minutes) 13:55-14:00 | (4 minutes) 14:20-14:24 | | |
| Grade 3 | | | (5 minutes) 14:00-14:05 | (1 minute) 14:24-14:25 | | |
| Grade 4 | | | | | | |
| Grade 5 | | | | | | |

Teacher B is a mathematics teacher. Before leaving a class he assigns SLA for each grade.

Since he has only a few minutes with each grade, he demonstrates one problem on the blackboard, explaining how to solve it, and then gives some exercises from the textbook which follow the same pattern as the problem demonstrated. When he returns to a grade, he checks the notebooks of the students. If he finds that students have had difficulties solving the problems, he explains them again or gives individual feedback.

He tries to keep all grades of the multigrade class occupied and tries to avoid time wastage for the students during the periods when they are not with a teacher. However, frequent visits to two or three different classrooms imply a heavy workload for the teacher. To make this worse, there are three buildings in the school compound and the distance between the classroom of Grade1 and the classrooms of Grades 2 and 3 is approximately 50 meters. This method is probably difficult to keep up every day.

Table 6-14 Movement of Teacher B in Durga primary school, later research

| | Lesson 1<br>10:15-11:00 | | Lesson 2<br>11:00-11:45 | | Lesson 3<br>11:45-12:30 | Lesson 4<br>12:30-1:15 |
|---|---|---|---|---|---|---|
| Grade1 | | | (15 minutes)<br>10:55-11:10 | | | (6 minutes)<br>12:40-12:46 |
| Grade 2 | | | (15 minutes)<br>11:24-11:52 | | | (13 minutes)<br>12:54-1:07 |
| Grade3 | | | (14 minutes)<br>11:10-11:24 | (1 minute)<br>11:53-11:54 | | (8 minutes)<br>12:46-12:54 |
| Grade 4 | (13 minutes)<br>10:15-10:28 | (3 minutes)<br>10:49-10:52 | | | (20 minutes)<br>12:20-12:40 | |
| Grade 5 | (20 minutes)<br>10:28-10:48 | | | | 11:57-12:20<br>(23 minutes) | |

In fact, additional later research shows that the frequency of visits decreases, as shown in Table 6-14. During the first two lesson periods, Teacher B visited only Grades 4 and 3 twice, spending more time in each class. During the following two lesson periods, he spent even more time in individual classes and visited each only once. On the next day, a multigrade teaching pattern was barely evident and for some time he did not even go to a classroom, but rather stayed in the office. As a result, Grade 5 students had only 72 minutes of teaching out of a possible 170 minutes of class time during that morning. For the rest of the time the students were doing nothing, simply waiting for the school day to end.

This method with frequent visits to classrooms – when it is conducted properly – can be effective to keep several grades occupied at the same time and can improve the students' time

on task. However it appears difficult to keep up continuously. As a result, the students have to face more time wastage. Such a multigrade teaching strategy fatigues the teachers so that they soon lose their motivation for teaching.

### 6.2.5 Pattern five: whole class teaching for extra curricular subjects

In all schools, extra curricular subjects such as sports and music are occasionally taught for two or more grades together. The teacher treats them as one class without differentiation for different grades. During whole class lessons, students of different grades are not considered to have different abilities and to be at different psychological levels, but are taught like a regular monograde class. Although in fact differences were noticeable, especially when the students played games, teachers did not differentiate the lessons for different grades.

Table 6-15 Lessons with whole class teaching

| patterns | schools | Teachers | Grades | subjects |
|---|---|---|---|---|
| 1 | Shakti | | KG and Grade 1 | English |
| 1 | Shakti | MGT trained | KG and Grades 1 | health (sports) |
| 2 | Krishna | | all grades | music and dance |
| 2 | Krishna | | all grades | health (sports) |
| 3 | Kali | | Grades 4 and 5 | health (sports) |
| 3 | Kali | | Grades 4 and 5 | health (sports) |
| 4 | Durga | MGT trained | Grades 2 and 3 | health (sports) |

Table 6-15 shows that whole class teaching takes place in all schools which normally follow four different teaching patterns. Reasons for choosing whole class teaching are related rather to the structure of the curriculum than to its suitability for student learning. Subjects such as sports, music and English for KG and Grade 1 are taught together, because textbooks for these subjects are either not available or are not published grade-wise.[3] As in these subjects there is no fixed target to teach for each grade, the teachers teach the subjects with some original content, i. e. the content taught is created by each teacher. For example, the teachers in Kali primary school and Durga primary school introduced local games to the students in the playground. The teachers at Krishna primary school gathered all students and teachers of the school together, doing gymnastic exercises for health lesson.

[3] There are no textbooks for music and arts. There is only one textbook for sports for all grades, giving no indication of the appropriateness of teaching activities for different grades. There are no textbooks for English

### 6.2.6 Revisiting the first observation

Through the longer visits, five patterns of multigrade class organisation are identified. In order to verify the applicability of these patterns to other schools, the patterns were applied to the 12 classrooms previously visited. Table 6-17 shows that the patterns are indeed applicable to those 12 classrooms. Two classrooms could be categorised as conforming to pattern one, three classrooms to pattern two, one classroom to pattern three, five classrooms to pattern four, and one classroom to pattern five.

Table 6-16 Patterns of multigrade class organisation in the 12 classrooms

| patterns | multigrade class organisation | SN | schools | teachers | Grades | subjects | tasks |
|---|---|---|---|---|---|---|---|
| 1 | monograde school | 2 | Shakti | | Grades 2 + 5 | English | |
| 1 | monograde school | 6 | Ganesha | | Grades 2 + 4 | arts and health | homework |
| 2 | monograde class | 1 | Shiva | | Grades 1 + 2 | social studies | |
| 2 | monograde class | E | Rama | | Grade 2 + 3 | mathematics | homework |
| 2 | monograde class | F | Krishna | | Grades 4 + 5 | mathematics | homework |
| 3 | main and additional classes | 3 | Kali | | Grades 1 + 2 | Nepalese and mathematics | SLA |
| 4 | frequent visits | 1 | Shiva | MGT trained | Grades 2 + 3 | mathematics | SLA |
| 4 | frequent visits | 4 | Durga | MGT trained | Grades 1+2+3 | mathematics | SLA |
| 4 | frequent visits | 5 | Parvati | MGT trained | Grades 1 + 3 | mathematics | SLA |
| 4 | frequent visits | 7 | Kartik | MGT trained | Grades 2 + 3 | mathematics | SLA |
| 4 | frequent visits | 8 | Buddha | MGT trained | Grades 1 + 2 | Nepalese | SLA |
| 5 | whole class teaching | 7 | Kartik | | all grades | music | |

It is interesting to note, as shown in Table 6-16, that the teachers who have received Multigrade Teaching Training tend to organise their classes in accordance with pattern four. They visit the grades of their multigrade classes frequently, assign SLA and give feedback to the work of the students. They are aware of the fact that they are responsible for two or more grades at the same time and try to keep them occupied all the time. We can safely assume that these teachers have acquired their sense of responsibility for two or more grades which need to be taught at the same time and the technique of assigning SLA through Multigrade Teaching Training. The teachers on the other hand who have never received Multigrade

for Grades 1 to 3. There is no curriculum for KG at all.

Teaching Training create various original methods of class organisation, including patterns one to three as described above. The influence of Multigrade Teaching Training is clearly visible in the classrooms studied. The case studies reveal that Multigrade Teaching Training is being successful in producing trained teachers who understand the teacher's responsibilities in multigrade teaching.

Applying multigrade training contents to schools which have adopted teaching pattern one is problematic. Multigrade teaching here goes beyond a single classroom, which means that it does not depend on individual teachers. For example, Shakti primary school organises itself as a multigrade school according to pattern one. The school has one teacher who has received Multigrade Teaching Training, but despite his training, he cannot organise his classes as specified by the training programme.

The general application of pattern five is also confirmed by the first visits. In Kartik primary school, whole school teaching was observed for the folk music lessons. All grades are combined and have lessons together. The activities are not differentiated by grade or the abilities of students. The school combines all grades, because there are no instructions for folk music in the textbook. Grades are not taught together as a whole class for subjects within the grade-wise curriculum.

### 6.2.7 Questionnaire

In order to verify the patterns of multigrade class organisation in a broader context, a questionnaire was distributed to all teachers in Sunthan RC, Kavre district, and Trishuli RC, Nuwakot district, who have had experience with multigrade teaching. Twenty-one teachers in Sunthan RC and 35 teachers in Trishuli RC filled in the questionnaires.

In the questionnaire, the question concerning the organisation of multigrade classes was formulated in an open-ended form, such as not to lead to answers necessarily reproducing the patterns previously identified in the mini and longer case studies. Only a few teachers answered this question, but their answers matched my four patterns. No different form of class management was found in the available answers. Table 6-17 shows that 11 teachers

organise classes according to pattern three, three teachers according to pattern four and one teacher according to pattern one.

Table 6-17 Multigrade class organisation among the teachers in the two RCs

| Patterns of class organisation | Current multigrade class organisation | Teachers | |
|---|---|---|---|
| | | Kavre district (Sunthan RC) | Nuwakot district (Trishuli RC) |
| 3 | one class SLA, the other class taught directly | 7 | 4 |
| 4 | one class exercises, the other class exercises, with checks on both | 1 | 2 |
| 2 | equal teaching time for two classes | 1 | 0 |
| | no answer | 12 | 29 |
| | total number of teachers | 21 | 35 |

Additionally, we can assume that no answer probably means the application of pattern one. Multigrade teaching according to pattern one takes place beyond one single classroom so that it becomes invisible. It is very difficult to describe multigrade teaching in this particular environment. Moreover, the teachers in schools applying pattern one do not realise their responsibility for two or more grades at the same time. They say they are multigrade teachers, because there is an insufficient number of teachers in the schools, but they do not understand in fact that what they are doing is multigrade teaching. As there are many teachers who did not answer the question on the organisation of multigrade teaching, the frequency of pattern one is probably high.

## 6.3 Teaching activities in multigrade classrooms

### 6.3.1 Teaching activities

Mostly the teacher lectures and the students listen. For languages or social studies, the teacher reads from the textbook and the students repeat after the teacher. The students recite phrases from the textbook or, for memorisation, copy them several times to their notebooks. In mathematics, the teacher demonstrates one or two problems on the blackboard. The students are given similar problems from among the exercises in the textbook to solve by themselves.

These traditional teaching styles should probably be improved on, but the form of teaching is not a particular issue for multigrade teaching, since the same form of teaching is seen in monograde classrooms. When the teacher is physically in the classroom, teaching activities in the multigrade classroom are the same as in monograde classrooms. Schools using pattern one shift from multigrade classes to monograde classes. The teacher in the classroom organised according to pattern two also produces two monograde classes, dividing a lesson period into two. With pattern three, the teacher teaches the main class as monograde, while the additional class works on SLA. Therefore, teachers teach a given grade as monograde in patterns one, two and three.

In a monograde classroom following pattern four, the teacher gives tasks to the students, and simply waits for the completion of individual work or assists individuals. The difference between monograde and multigrade teaching, within the framework of pattern four, is that the multigrade teacher has to move to another classroom instead of assisting in the same classroom. Therefore here as well the form of teaching is not different between monograde and multigrade classrooms.

### 6.3.2 Use of teaching materials

Although schools in Nuwakot district have received some supplementary teaching material (see 5.2.4), only one teacher in Durga primary school used for example the alphabet cards. This was observed for both monograde and multigrade classrooms. Some teachers used stones, pieces of chalk, students or fingers during mathematics classes. The main teaching materials used however remain the textbooks and the blackboard. A drum was used for music and dancing lessons in most schools. In Kavre district, no additional teaching material was used during the observation.

### 6.3.3 Learning amount

While the teaching activities of teachers using all four patterns were not different, the student learning amount differs. Although teacher activities for one grade within a multigrade classroom are the same as in a monograde classroom, there is a significant difference in the amount of time given to each grade. Since the number of teachers available is not sufficient, self-learning time for students cannot be avoided in a multigrade classroom. With pattern one

Grade 5 students were without teacher supervision for 37.6 percent of their time in school. They were alone for 25 percent of the time with pattern three and for 57.6 percent with pattern four (Suzuki, 2000). Using this amount of time productively, or just wasting time, can make a big difference at the end of the academic year. For instance, according to the amount of textbook covered by Grade 5 students by the end of November 2000, we can identify significant differences between the three patterns.[4] Table 6-18 indicates that the school using pattern one covered only 25% of the mathematics, 24% of the English, and 32% of the science textbooks, while the school using pattern three covered 35%, 38% and 63% and the school using pattern four covered 31%, 31% and 46% respectively.

Table 6-18 Coverage of textbooks for Grade 5 in three schools

| | Mathematics | | English | | Science | |
|---|---|---|---|---|---|---|
| whole textbook | 175 pages | 100% | 184 pages | 100% | 151 pages | 100% |
| pattern one | 45 | 26% | 41-44 | 24% | 49 | 32% |
| pattern three | 62 | 35% | 68-69 | 38% | 95 | 63% |
| pattern four | 53-54 | 31% | 57 | 31% | 69 | 46% |

Note: The three schools use the same textbooks.

## 6.4 Problems with multigrade class organisation

The form of teaching is not a particular issue for multigrade teaching since teachers teaching multigrade and monograde use the same forms of teaching. Although the quality of teaching is low, this is not directly caused by multigrading. The significant disadvantage when compared with monograde teaching is the availability of less time. In order to increase the learning time of students in multigrade teaching, an improvement of class organisation should be attempted, rather than a change of teaching methods.

### 6.4.1 Diversity in teacher responsibilities for multigrade teaching

The school visits revealed that the multigrade class organisation varied from school to school and from classroom to classroom. Multigrade class organisation was categorised into five patterns. Table 6-19 summarises the characteristics of the five patterns, including features of class organisation and degrees of responsibility for two or more grades simultaneously.

[4] This assumes that all schools start teaching at the same time and follow the textbooks sequentially without any

Table 6-19 The characteristics and diversity of multigrade class organisation

| patterns | the features of class organisation | identification of the class as a multigrade class | responsibility for two or more grades simultaneously | control of student time on task during self-learning time |
|---|---|---|---|---|
| 1 | sharing the time of teachers for all 5 grades | | | |
| 2 | dividing the lesson period into two | √ | | |
| 3 | using a main teaching class and an additional SLA class | √ | √ | |
| 4 | frequent visits | √ | √ | √ |
| 5 | whole class teaching | √ | √ | √ |

In pattern one, students from different grades are seated in different classrooms. The teachers divide their teaching day by the number of grades they have to cover, and teach each grade individually, one after the other. The first pattern, by dividing the teachers' time into the number of classes they have to cover, shifts the school from a multigrade school to a monograde school. 'A multigrade class' is not identified and multigrade teaching is physically invisible. Therefore, the teachers do not realise their responsibility for two or more grades at the same time. Part of the students' time in each grade group is sacrificed, but the teachers do not realise their responsibility for the time students are idle.

In pattern two, students from different grades are seated in the same classroom. These two grades are identified by the teacher as 'a multigrade class.' The multigrade class is physically visible so that the teachers know that they have to deal with two or more grades during the same lesson period. However, they do not realise their responsibility for two or more grades at the precisely same time. Teachers divide the lesson period of the multigrade class equally into two time sections and teach each grade group separately, as if they were teaching two monograde classes. As a result, they do not provide SLA and do not occupy the time students are idle.

In pattern three, two or more grades are treated as 'a multigrade class.' One grade is considered the 'main teaching class', the others as 'additional classes.' The teachers recognise their simultaneous responsibilities for both grades. For the additional class they provide SLA at the beginning of the lesson period and feedback at the end. However, they

skips.

fail to control the additional class, because of an inappropriate amount and quality of SLA to cover a 45-minute lesson.

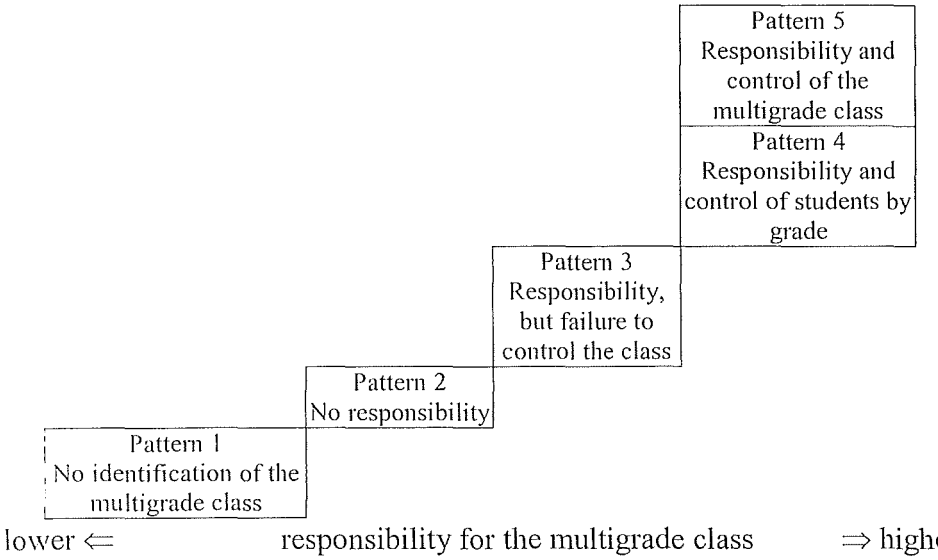
In pattern four, the teachers also recognise their responsibility to simultaneously control 'a multigrade class.' The teachers visit two or more grades frequently during one lesson period. The grades receiving these frequent visits during a lesson period are identified as a multigrade class. The teachers realise their responsibility and provide SLA whenever they leave one grade. By visiting and checking all grades frequently, they control the student activity during SLA.

In pattern five, the grades grouped together during a lesson period are identified as 'a multigrade class.' Subjects such as sports, music and arts are taught to a whole class. The teachers in pattern five identify two or more grades as a whole class and teach them together. The teachers are responsible for the grades simultaneously. All students of the multigrade class receive direct teaching from the teacher and their activities during the lesson are controlled.

### 6.4.2 The ladder of multigrade teaching

Taking into account the characteristics of the patterns and the level of the teachers' realisation of their responsibility for multigrade teaching, the five patterns of multigrade class organisation allow the construction of a ladder (Figure 6-2). The degree of conscious responsibility for multigrade teaching increases from pattern one to pattern five. With pattern one, the multigrade class is not identified. As a result, the teacher does not realise his responsibility for the multigrade class. With pattern two, the multigrade class is identified. However the teachers still do not realise their responsibility for the multigrade class. The teachers following pattern three realise their responsibility, but fail to control the class taught indirectly. The teachers using pattern four realise their responsibility and they succeed in controling the multigrade class. The teachers applying pattern five identify two or more grades as a whole class and teach them together.

Figure 6-2 Ladder of multigrade class organisation




Since multigrade teaching has various features and the level of teacher responsibility for multigrade teaching also varies, the problems concerning multigrade teaching – as well as their solutions – are different from pattern to pattern.

## 6.5 Teacher perception of problems in relation to multigrade teaching

### 6.5.1 Negative perception of multigrade teaching

Teachers who filled in the questionnaires certainly have a negative perception of multigrade teaching.[5] Although some teachers think that multigrade teaching is manageable for teachers with specific skills and techniques, the overall impression on multigrade teaching tends to be negative. The following are statements from teachers concerning multigrade teaching.

> Since one teacher has to manage many classes, there is *insufficient student learning achievement* (Nuwakot-K2, multigrade).
>
> Multigrade teachers cannot have free time and relaxation. *It is boring for students, too* (Kavre-12, multigrade).
>
> In Nepal, there is an insufficient provision of teachers so that we *cannot expect a successful teaching profession* (Nuwakot-R1, multigrade).

[5] Eighty-seven teachers (58, Nuwakot and 29, Kavre districts) filled in the questionnaires (cf. Table 4-4).

> Multigrade teaching *deteriorates the education system* of Nepal (Nuwakot-R21, multigrade).

This negative perception of multigrade teaching is found not only with teachers who have experience of multigrade teaching, but it is also shared by monograde teachers who have never experienced multigrade teaching.

> Multigrade teaching *does not help quality education.* A teacher cannot check every student's work so that student evaluation is not done properly (Nuwakot-K18, monograde).
>
> When the opening of a school is authorised, there is no real distribution of teacher assignments. Therefore, educational management cannot be done based on the number of the classes. *We, teachers, are compelled to face such a situation* (Kavre-31, monograde)
>
> Since our school has a sufficient number of teachers, we *do not have to adopt* multigrade teaching (Nuwakot-K10, monograde).
>
> We do not have *this problem* in our school (Nuwakot-K12, monograde).
>
> Multigrade teaching is *not necessary* in our school (Nuwakot-K15, monograde).
>
> My school has a sufficient number of teachers so that we do not have *this problem*. If we face such a problem, we will manage classes by adopting the methods learnt in the training (Nuwakot-R20, having multigrade teaching experience, but currently working in monograde school).

These comments on multigrade teaching indicate that the teachers think that *multigrade teaching is a problem* rather than thinking that *they have problems with multigrade teaching.* Moreover, the negative perception of multigrade teaching does not arise from personal experience, but is rather a prejudice conditioned by the monograde dominance in the school system. A negative perception of multigrade teaching is embedded broadly and deeply in the teaching concepts of the teachers.

### 6.5.2 Problems which the teachers take into consideration

This section discusses how the teachers, who are currently teaching, or have taught in multigrade schools, feel about multigrade teaching. A majority of teachers says that

according to their experience multigrade teaching is more difficult than monograde teaching (Table 6-20).[6]

Table 6-20 Is multigrade teaching different from monograde teaching?

| difference | Kavre district | Nuwakot district | Total |
|---|---|---|---|
| easier | 0 | 1 | 1 |
| no difference | 2 | 1 | 3 |
| more difficult | 19 | 31 | 50 |
| no answer | 0 | 2 | 2 |
| total number of teachers who are currently teaching, or have taught in multigrade schools | 21 | 35 | 56 |

Table 6-21 shows that a majority of teachers thinks that they have problems when they teach multigrade classes.

Table 6-21 Do you have any problems when you teach multigrade classes?

| Problems | Kavre district | Nuwakot district | Total |
|---|---|---|---|
| yes | 19 | 32 | 51 |
| no | 2 | 1 | 3 |
| no answer | 0 | 2 | 2 |
| total number of teachers who are currently teaching, or have taught in multigrade schools | 21 | 35 | 56 |

Table 6-22 and the following bullet points list the types of problems teachers are facing with multigrade teaching.[7] The most significant problems with multigrade teaching for the teachers in this case study are 'the lack of time to cover the lessons for several grades,' 'student control without teacher presence during the teacher's physical absence,' and 'low student academic achievement.'

Table 6-22 shows that a number of teachers think that 'time shortage' is a problem. Two teachers (Nuwakot-B3, Nuwakot-B28) cited finishing all graded curriculum contents within a limited time period as an impossible contradiction. One of them (Nuwakot-B28) stated that 'there is a lot of time wasted (in multigrade teaching).' Another teacher (Kavre-12) mentioned 'the large burden for the teachers, with no free time and relaxation.' On the other hand, teacher Kavre-12 has no intention to integrate grades nor to teach them together for graded subjects. These comments by teachers lead to the conclusion that the norm for them is

[6] Among the 87 teachers who filled in the questionnaires, only answers of 56 teachers (28, Nuwakot and 28, Kavre districts) who were currently teaching (16, Nuwakot and 12, Kavre districts) or had previously taught in multigrade schools (19, Nuwakot and 9, Kavre districts) were selected.

one teacher, one grade group of students, one textbook for one grade and one time period for teaching. With multigrade teaching, one teacher has to take responsibility for students of two or more grades, and use two or more graded textbooks during one time period. This means that in comparison with the norm of monograde teaching teachers and time are missing. Consequently teachers feel that they bear an extra burden and are short of time.

Table 6-22 Types of problems with multigrade teaching for the teachers

| categories | problems | Kavre district | Nuwakot district | Total |
|---|---|---|---|---|
| | I do not know how to teach effectively. | 8 | 8 | 16 |
| | I do not know how to manage students in general. | 5 | 3 | 8 |
| Time shortage | I do not have enough time to teach several classes. | 19 | 31 | **50** |
| Management | I do not know how to manage multigrade classes. | 10 | 9 | 19 |
| Self-learning time | I do not know how to prepare SLA. | 11 | 15 | 26 |
| Self-learning time | The students cannot work alone. | 15 | 22 | **37** |
| Self-learning time | The students are noisy when they are alone. | 17 | 19 | **36** |
| Self-learning time | I cannot appoint a monitor or a group leader. | 0 | 1 | 1 |
| Self-learning time | The monitor cannot help as I had hoped. | 13 | 13 | 26 |
| Self-learning time | I cannot supervise the student activities myself. | 9 | 11 | 20 |
| Student achievement | The students cannot learn as I expect. | 19 | 22 | **41** |
| | total number of teachers who are currently teaching, or have taught in multigrade schools | 21 | 35 | 56 |

Other answers were as follows:

- It is difficult to cover the curriculum contents (for several grades) within one period of *time* (Nuwakot-B3).
- There is a lot of *waste of time* so that it is difficult to move ahead with lessons (Nuwakot-B28).
- I cannot check all the students' exercises (Nuwakot-K24).

[7] Table 6-22 is based on answers to multiple-choice questions and the following bullet points are based on written answers.

- When using real materials to help learning for one grade, *the activity affects (interrupts) the students of the other grade.* Multigrade teachers *cannot have free time and relaxation.* There are not all of the necessary materials (Kavre-12).
- The lack of parental participation as monitors (Nuwakot-K6).
- Literacy problems of parents (Nuwakot-K7).

A second problem with multigrade teaching concerns student self-learning during periods when they are left alone in the classroom. The teachers think the 'appointment of a monitor' is not a problem, but that 'a monitor cannot help' and that 'the students cannot be controlled when they are not with their teacher.' Some teachers think also about SLA, they worry about the inefficiency of self-learning when their students are left alone in the classroom. Some teachers believe that they absolutely have to teach multigrade classes directly.

A third problem, 'concerns about student academic achievement', is also a significant issue for all teachers. This indicates that the teachers are concerned very much with the output of education.

## 6.6 Teacher perception of the needs of multigrade teaching

What do teachers require to solve their problems?[8] Answers range from internal factors, directly related to the classroom, to external factors which deal with the broader context of education. Table 6-25 shows that the factors can be categorised into six categories: teachers, students, parents, equipment, RCs and the government.[9]

### 6.6.1 Teacher training

Among potential solutions, teacher-related factors were seen as the most important. Table 6-23 shows that 61 teachers think that teachers are significant for successful multigrade teaching. Teacher-related factors were cited by more teachers than facilities and teaching material (49 teachers), as well as supervision and encouragement (8 teachers). The most common teacher-related issue, 'training,' was cited by 24 teachers. A number of teachers appreciate the opportunity of undergoing training. They think that teaching and learning

[8] In order to get all sorts of ideas from the teachers, the question was formulated in an open ended way.
[9] Equipment includes the provision of adequate physical facilities as well as teaching and learning materials. RC's include the separation of teachers and supervisors. The factor of government concerns the salaries of

activities in the classroom can be improved through the acquisition of the necessary skills and knowledge.

Table 6-23 Necessary factors for solving multigrade problems, according to teachers

| responsibility | needs for improving multigrade situation | Kavre district | Nuwakot district | Total |
|---|---|---|---|---|
| teachers (61 teachers) | training | 7 | 17 | 24 |
| | skills, qualified teachers | 6 | 0 | 6 |
| | skills and creativity (art and music) | 0 | 2 | 2 |
| | monitors | 4 | 0 | 4 |
| | group work | 2 | 0 | 2 |
| | class management | 3 | 3 | 6 |
| | teaching and learning process improvement | 1 | 3 | 4 |
| | production of lesson plans | 2 | 0 | 2 |
| | teachers should work hard | 1 | 0 | 1 |
| | correct use of time | 2 | 1 | 3 |
| | adaptation of what has been learnt in the training | 1 | 2 | 3 |
| | active and positive behaviour of teachers | 2 | 2 | 4 |
| students (3 teachers) | encouragements for the students, scholarships | 2 | 0 | 2 |
| | student should understand lessons | 1 | 0 | 1 |
| parents (2 teachers) | meetings for parents | 0 | 2 | 2 |
| equipment (49 teachers) | teaching material (including games) | 4 | 19 | 23 |
| | physical facilities (including sufficient classrooms of adequate size) | 5 | 21 | 26 |
| RC's (8 teachers) | supervision, evaluation, suggestions | 6 | 0 | 6 |
| | encouragement for the teachers | 1 | 0 | 1 |
| | cluster meetings to share experiences | 1 | 0 | 1 |
| government (11 teachers) | special allowance for multigrade teachers | 0 | 3 | 3 |
| | salary increase | 0 | 2 | 2 |
| | sufficient teacher allocation | 0 | 5 | 5 |
| | curriculum improvement | 1 | 0 | 1 |
| others | sufficient time | 1 | 0 | 1 |
| no answer | | 0 | 8 | 8 |
| total number of teachers who are currently teaching, or have taught in multigrade schools | | 21 | 35 | 56 |

'Training' includes citations of 'additional training,' 'quality training,' 'sufficient training,' 'training in schools with real settings,' 'multigrade training' and 'other specific subject training' such as creativity training. With regard to 'training', some teachers think that acquiring specific skills and techniques, such as the appointment of monitors, the

teachers and their recruitment.

organisation of group work and of SLA, is necessary for successful multigrade teaching. Multigrade teacher should be able to use these skills in the classroom. Some teachers believe that the teacher's attitude and responsibility, as well as his willingness to take training, are important.

### 6.6.2 Physical facilities and teaching materials

'Training' is followed by citations of 'physical facilities' (26 teachers) and 'teaching material' (23 teachers).[10] An important number of teachers think that sufficient teaching material and adequate physical facilities should be provided. Twenty-one teachers in Nuwakot district state that the physical facilities of schools should be improved – only five teachers in Kavre district demand better facilities. Although different types of teaching material were not identified in the questionnaires, nineteen teachers in Nuwakot district state that a sufficient amount of 'teaching material' is necessary – again only four teachers in Kavre district demand more 'teaching material.'

### 6.6.3 Supervision and others

Eight teachers in Kavre district asked for encouragement of the teacher through supervision and cluster meetings; none of the teachers in Nuwakot district mentioned this. Five teachers asked for more incentives, including a salary rise and special allowances. Five teachers demanded the allocation of more teachers to schools in Nuwakot district. Only a few teachers complain about an insufficient contribution by students and parents.

## 6.7 Conclusion

*The condition of multigrade classrooms*

In Nuwakot district, in the schools visited, students of each grade are seated in separate classrooms (6.6.1, 6.6.4), because all schools have a sufficient number of classrooms for all grades (5.2.2). In Kavre district, where the number of classrooms matches the number of grades, the students are seated separately. When there are not enough classrooms, students of

[10] Physical facilities include a sufficient number of classrooms of an adequate size.

different grades share the same classroom. Compared with the international situation, the case of Nuwakot district is unique among the countries reviewed, because students of multigrades are generally seated in one classroom (2.5.2). The differences in classroom conditions cause two different types of combination of grades.

*The five patterns of multigrade class organisation*

Compared with the international situation, Nepalese multigrade teaching is more diverse than other reviewed countries. In the developing countries reviewed, three patterns of multigrade class organisation have been identified (2.4.4-2.4.6). This study identified the five patterns of multigrade class organisation (6.2). They allow the construction of a ladder, using the characteristics of class organisation and the level of teacher responsibility (6.4.2).

*Teaching activities in multigrade classrooms*

Normally, teachers in multigrade classes teach in the same way as in monograde classes (6.3.1). When the teacher is present in the classroom, teaching activities in the multigrade classroom are the same as in monograde classrooms. Teachers teach using traditional methods including lecture and copying. The main teaching materials are the textbooks and the blackboard (6.3.2), even though some schools have other teaching materials (5.2.4). Teachers usually make their students work individually (6.1.1), probably because the furniture is arranged in rows, and heavy wooden desks attached to benches make group work impractical (5.2.2).

*Problems in multigrade classrooms identified by the researcher*

Although teacher activities for one grade within a multigrade classroom are the same as in monograde classrooms, there is a significant difference in the amount of time given to each grade. The most significant disadvantage of multigrade teaching is rather limited time than a problem with teaching methods. In order to increase the learning time of students in multigrade classes, the forms of class organisation should be improved.

*Problems in multigrade classrooms perceived by multigrade teachers*

The overall opinion of teachers concerning multigrade teaching tends to be negative. The teachers consider that *multigrade teaching is a problem* rather than thinking that *they have problems with multigrade teaching.* The most significant problems with multigrade teaching

for the teachers are: 'the lack of time to cover the lessons for several grades,' 'student control without teacher presence during the teacher's physical absence,' and 'low student academic achievement' (6.5). The teachers' opinions also indicate that the problems of multigrade teaching do not lie so much with the teaching methods, but rather concern time constraint and class management.

*Most essential needs in multigrade classrooms*

The teachers consider that 'teacher training', 'physical facilities and teaching material', as well as 'supervision', are the most essential factors in the multigrade classroom (6.6). Among them, 'teacher training' seems to be the most significant solution. The improvement of physical facilities and the provision of teaching material are not as important for the improvement of multigrade teaching as it might appear (2.5).

Many schools having a sufficient number of classrooms still organise multigrade teaching according to pattern one (5.2.2, 6.2.1, 6.2.6, 6.2.7). The conditions of facilities in multigrade schools in Nuwakot district are often better than those in Kavre district (5.2). Still, the teachers in Nuwakot district complain more often about the conditions of facilities (6.6). On the other hand, teachers in Kavre district where the school conditions are worse than in Nuwakot district do not complain about the conditions of facilities.

In Nuwakot district, the schools have received teaching material and training to produce teaching material (5.2.4). However, no teaching material other than the textbooks and the blackboard were used, except by one teacher (6.3.3). Also, the schools in Kavre district have not yet received material from DEO and the schools rarely have any teaching material. However, the teachers did not complain about this very much (6.6).

The effectiveness of the 'supervision' system still needs time to evaluate, because it has just started in Kavre district (5.2.5). Thus 'teacher training' seems the most relevant potential solution, based on the research in practice levels.

Chapter Three has already established that the most important national strategy for multigrade teaching is in-service 'teacher training' for multigrade teaching. This means that multigrade teachers demand 'teacher training' and that the government supplies 'teacher

training' for multigrade teaching. Superficially, 'demand' at the operative level and 'supply' from the government match with the organisation of multigrade teaching.

From here on the focus of this study will shift from understanding the structure of multigrade teaching at both policy and practice level, to evaluating the interaction between the two levels. This is necessary in order to investigate whether the training policies are successful in improving multigrade teaching in the classroom. The following chapters therefore focus on teacher training for multigrade teaching.

# Chapter Seven
# The model of Multigrade Teaching Training with regard to innovation and change

Prior to evaluation, this chapter investigates Multigrade Teaching Training with regard to theories of innovation and change. To begin with models of innovation and change are reviewed and classified into three types of orientation (innovation, diffusion and user orientations). Then, the training system in Nepal is examined with regard to these three types in order to understand the characteristics of the training programme. The first section reviews the theories of innovation and change. The second section examines the quality of training materials with regard to the innovation orientation of training. The third section analyses the cascade system looking at the diffusion orientation. The fourth section investigates the involvement of teachers. This concerns the user orientation of the training system.

## 7.1 Models of innovation and change in educational practice

Various researchers have classified models of educational innovation and change. One of the pioneers, Havelock (1969), has identified three models. These models are based on neo-evolutionary and psychological theories. Chin and Benne (1969) also have distinguished three models (Dalin, 1978).[1] Based on their work, the models were subsequently refined – by Havelock and Huberman (1977) and others (Dalin, 1978; Fullan, 1985; Hurst, 1983; Lewin, 1991). Dalin (1978) proposes four models, adding the linkage model to the models of Havelock (1969). Havelock and Huberman (1977) have integrated the work of Chin and Benne (1969) into Havelock's earlier research (1969) and propose five models, based on empirical evidence from questionnaires sent to 81 teacher training project directors and chief technical advisors.[2] Fullan (1985) identifies only two models.[3] Finally Lewin (1991) proposes six models.[4]

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[1] The three models of Chin and Benne (1969) are: (1) the empirical-rational model, (2) the normative-re-educative model and (3) the power-coercive model. The three models of Havelock (1969) are: (1) the research, development and diffusion model, (2) the social interaction model and (3) the problem-solver model.

[2] The models are the: (1) participative problem-solving, (2) open input, (3) power (previously power-coercive), (4) diffusion (previously social interactive perspective) and (5) planned linkage models.

[3] An innovation-focused model and an school-based model.

[4] The systems model is close to Chin and Benne's (1969) rational-empirical model. The bureaucratic model is related to the power-coercive model by Chen/Benne. The scientific model is similar to the research, development and diffusion models of Havelock (1969) and the rational-empirical model of Chin and Benne Then there are a problem-solving model and a diffusionist model, the latter being close to the social-interaction

Table 7-1 presents this wide array of models in three columns, the first showing the dominant paradigm of innovation and change (equilibrium vs. conflict), the second defining the main orientation of the process of change (innovation, diffusion, user or power) and the third associating the various models with the paradigms and the orientation of change. All these dimensions will be further examined in the following sections.

Table 7-1 Mapping of the models of educational innovation and change

| Paradigm | Main orientation | Model[5] |
|---|---|---|
| equilibrium | Innovation-oriented | innovation-focused (Fullan) |
| | | empirical-rational (Chin/Benne) |
| | | research, development and diffusion (Dalin, Havelock) |
| | | systemic/structural (Hurst) |
| | | scientific (Lewin) |
| | | systems (Lewin) |
| | | open input (Havelock/Huberman) |
| | Diffusion-oriented | social interaction (Dalin, Havelock) |
| | | diffusion (Havelock/Huberman) |
| | | diffusionism (Hurst) |
| | | diffusionist (Lewin) |
| | | charismatic (Lewin) |
| | | linkage (Dalin, Havelock) |
| | | planned linkage (Havelock/Huberman) |
| | User-oriented | normative-re-educative (Chin/Benne) |
| | | phenomenological (Hurst) |
| | | problem-solver (Havelock) |
| | | problem-solving (Dalin, Lewin) |
| | | participative problem-solving (Havelock/Huberman) |
| | | school-wide (Fullan) |
| conflict | Power-oriented | power-coercive (Chin/Benne, Havelock/Huberman) |
| | | conflict/dependency (Hurst) |
| | | bureaucratic (Lewin) |

### 7.1.1 Equilibrium and conflict paradigms

model of Havelock and the normative-re-educative model of Chin/Benne. Finally there is the charismatic model.

[5] Although all models allow for harmonious relations, the models in the upper sections of Table 7-1 for example the innovation-focused strategy and the rational-empirical model, are extreme equilibrium paradigm models, focusing on systems and evolution. In contrast, the models in the lower sections of Table 7-1, such as the school-wide strategy and the participative problem-solving model, are closer to the conflict paradigm, taking into account social power and various identities.

The models can be divided into two groups corresponding to two different paradigms: an equilibrium/control and a conflict/change paradigm (Dalin, 1978; Hurst, 1983; Paulston, 1977). The equilibrium paradigm of innovation and change has been dominant for a long time. The conflict paradigm is less common, but competition between the two paradigms has recently increased, and there has now to be negotiation in the search for a mode of effective social change.

The *equilibrium paradigm* considers innovation an artificial process of adoption and adjustment, controlled harmoniously by homogeneous systems (Hurst, 1983). It uses evolutionary, neo-evolutionary, structural, functional and system theories. These theories suggest that through systematic interventions – with harmonious relations and in the form of a biological progression from inferior to superior – change occurs smoothly (Paulston, 1977). The majority of models reviewed in this chapter belong to this paradigm. They include the rational-empirical, normative-re-educative (Chin and Benne), research, development and diffusion, social interaction, problem-solver (Havelock), participative problem-solving, open input, diffusion, planned linkage (Havelock and Humbert), systemic or structural analysis, diffusionism, phenomenological (Hurst), innovation-focused strategy, school-wide strategy (Fullan), systems, scientific, problem-solving, diffusionist and charismatic (Lewin) model.

The *conflict paradigm* on the other hand considers innovation to be a political process, a natural sequence in which various individual identities enter into conflict over time (Hurst, 1983). It includes Marxist, neo-Marxist, cultural revitalisation, radical and anarchistic utopian theories. These theories suggest that change occurs solely through the restructurisation of social power relations, with conflicting values and cultural systems. Only this allows an escape from existing social oppression (Paulston, 1977). This paradigm underpins the power-coercive (Chin and Benne; Havelock) and the conflict/dependency (Hurst) approach, as well as the bureaucratic model (Lewin).

### 7.1.2 Innovation-oriented models

I have classified the various models according to four orientations. Accordingly there are innovation-oriented, diffusion-oriented, user-oriented and power-oriented models. The first orientation is the traditional one, emphasising *the quality of innovation.* Consideration is

given mainly to innovation itself and to its providers. Recipients are seen as passive consumer who will be influenced by innovation (Dalin, 1978; Havelock, 1969; Lewin, 1991). The basic assumption of these models is that innovations are good. Innovations are formulated by innovation promoters and are justified by rational, morals, research or science considerations. This orientation includes the rational-empirical (Chin and Benne), research, development and diffusion (Havelock), open input (Dalin, Havelock and Humbert), systemic or structural analysis (Hurst) systems and scientific (Lewin) models. They are summarised in Fulan's innovation-focused strategy.

*Rational*

Chin and Benne (1969) argue that change occurs when innovation is rationally justified. The *empirical-rational model* (Chin and Benne; 1969), the most popular model in America and Europe, assumes that the providers of innovation possess the necessary knowledge to change current practice. The model assumes that people are instinctively rational and will follow their self-interest when it is explained to them rationally. When the proposed innovation is rationally justified, they will adopt change. Only ignorance and superstition on the part of the recipients prevent them from adopting change. The recipients gain power when they assimilate the knowledge implicit in innovation. In this argument the knowledge of the innovation providers is assumed to be desirable and useful for its recipients. Lewin's *systems model* (1991) is close to the Chin and Benne model. Innovation is part of a system which allows the achievement of rationalised goals – justified in the opinion of outside experts – within the wider social systems which are assumed to be stable and homoeostatic. In both models change is brought about by outside providers whose knowledge is rationally justified, increases the knowledge of recipients and reduces ignorance and superstition. Therefore, in order to achieve change, efforts have to be directed at increasing the rationale of the proposed innovation.

*Systematic research and development*

Based on the information and communication theory of the 1960s, research and development is considered to be an efficient means to increase rationality. In the *Systemic or structural analysis* model (Hurst, 1983), innovation in the social system is an artificial rather than a natural process. In order to increase rationality, innovation has to be 'artificial' and needs to be systematically researched, developed and planned before it can be implemented. In the

*research, development and diffusion model* (Dalin, 1978; Havelock, 1969), which is popular with the macro-systemic and policy level, innovation is an extensive process of research and development, including basic and applied research, development, production and packaging. *Systems models* and *scientific models* (Lewin, 1988, 1991) also insist on the importance of systematic research and development before implementation. Innovation processes have to be systematically developed by experts who have superior knowledge, based on scientific research within the wider social system, but outside the educational environment. As an example of application, in a study in Lesotho, the teacher-researchers carried out research on their own practice (Lewin, 1991: 288; Stuart, 1991). *Open input models*, originally proposed by Havelock (1973), emphasise the quality of research and development. They argue the importance of openness, multiplicity and flexibility which are necessary to develop innovation, making maximum usage of all inside and outside resources (Havelock and Huberman, 1977).

*Criticism*

Models of this type of orientation have been criticised for their high cost, as well as their over-rational, over-idealised, over-research oriented, but inadequate user-oriented, characteristics (Havelock, 1969). Another criticism levelled against them is that input-output analysis lacks any consideration of the process of change and of contextual variables (Hurst, 1983).

### 7.1.3 Diffusion-oriented models

Social interaction (Havelock), diffusion, (Havelock and Humbert), diffusionism (Hurst), diffusionist, linkage (Havelock and Huberman), planned linkage (Havelock and Humbert), and charismatic models (Lewin) emphasise the *communication process* between providers and users of innovation. Assuming that the innovation is rational, correctly conceived, and hence 'diffusible', these models stress the importance of the dissemination of innovation, rather than its content and the value of innovation for change (Havelock, 1969). They focus their interest on who diffuses innovation, how it is diffused efficiently and how the process of diffusion works.

*How diffusion works*

Assuming that the message is rational, correct and diffusible, the *social interaction model*, based on anthropological studies on the diffusion of cultural traits, focuses on the efficient diffusion of information or messages, rather than on their content or the value of the innovation (Havelock, 1969). *Diffusion models* emphasise methods of communication and the diffusion of innovation (Havelock and Humbert, 1977). *Diffusionist models* are similar to the social-interaction models (Lewin, 1991) and *diffusionism models* are the same as diffusion models (Hurst, 1983). The latter propose various communication methods, including the use of formal and informal networks, personal contacts, social interaction, multiple media, agents of change, opinion-leadership, feedback and salesmanship for change (Dalin, 1978; Havelock and Huberman, 1977; Lewin, 1991).

*Who diffuses innovation*

The *Charismatic model* (Lewin, 1991) deals with the problem of who is responsible for the diffusion of innovation, rather than with the question of how innovation is diffused. The impetus for innovation comes from an influential person, like Paulo Freire or Gandhi, who holds a personal conviction, it is not rationally based on research. Who diffuses innovation is important for the success of change.

*Linkage between groups involved*

Havelock's *Linkage notion* (1969) stresses the importance of a reciprocal relationship between provider and user systems for the formulation and implementation of innovation. The *planned linkage model* emphasises dialogue and co-operation between all relevant groups involved in innovation, including providers and users (Havelock and Huberman, 1977). It specifically stresses co-operation and dialogue between relevant inside and outside personnel. The *linkage model* (Dalin, 1978) criticises a situation where research and development strategies tend to rely on outsiders, the importance of outside roles is overestimate and a connection of the needs of insiders to research and development procedure is proposed. This model emphasises the significance of insiders.[6] A linkage model insists that collaboration and linkage between all groups – insiders-outsiders and providers-users – for the research, development and diffusion of innovation are necessary to achieve change. Users are included in this model, but the emphasis is still on innovation.

[6] The model nevertheless privileges knowledge utilisation, assumes that superior knowledge exists and that the main problem is linking user to superior knowledge.

*Criticism*

Innovation-oriented and diffusion-oriented models have been criticised because they value 'a thing (innovation)' higher than 'people (the users)' (Fullan, 1982). Many of these models are well-developed and useful, but they are limited as far as fundamental change is concerned (Fullan, 1985, 1992). They sometimes remain superficial and often lack assessment of the school (Fullan, 1985). The solution to this problem is not to provide ready-made, highly specific innovation, but to prepare an environment where the need for change can be realised over time, in co-operation with a user group (Fullan, 1982). Successful change depends on what users are able and ready to do. If there is no understanding on the part of the users, and innovation is limited to new materials and skills, only superficial change can be achieved (Fullan, 1989).

### 7.1.4 User-oriented models

The *user-oriented model* challenges the assumption that the best possible innovation is always based on rational and scientific research. This group of models includes the normative-re-educative (Chin and Benne), the problem-solver (Havelock), the participative problem-solving, the phenomenological (Hurst), the school-wide strategy (Fullan) and the problem-solving (Lewin) model. User-oriented models emphasise the *needs of the user*. They look at the immediate concerns of the recipients and the conditions at the practice level, i.e. schools and classrooms. Even if there is something like 'ideal' innovation, it is not meaningful unless people are able to make use of it. Change occurs only when people attempt to use a new idea (Fullan, 1982). Thus the user is the starting point. Without consideration of their needs and circumstances innovation becomes meaningless (Havelock, 1969). This means that the needs, attitudes, values and skills of the user, as well as the significant relationships among users, are more important for successful change than ideal innovation which concentrates on knowledge, information or intellectual rationalism (Chin and Benne, 1969).

*Understanding the needs of the users*

The *normative-re-educative model* argues that change is initiated in the culture of the recipient (Chin and Benne, 1969). People do not passively wait for change imported from

outside environment, but are motivated by their internalised values, meanings, norms and habits. Their system of values is supported by their own socio-culture and by the commitments of individuals. Thus change occurs only when the recipients are motivated to change their value system, to change from old to new patterns (Chin and Benne, 1969). Hurst's *phenomenological approach* (1983) is similar to the normative-re-educative model. Change occurs when it is accordance with the situation of the individuals concerned and corresponds to values in their own world.[7] Thus understanding the need of the users to receive relevant knowledge is important for initiating change in the real world.

*User initiatives*

However, providing the knowledge which users demand and understand is not enough to initiate change. Innovation has to be a problem-solving process which goes on inside the user (Dalin, 1978). Knowledge utilisation is only part of the problem-solving process (Havelock, 1969) – even though it is already a more important part than receiving knowledge (Dalin, 1978). Outside experts are able to convey some relevant knowledge to users, but the innovation process has to be self-initiated by the users to effect successful change (Havelock, 1969).

In *problem-solver, problem-solving and participative problem-solving models,* the problems and needs of the user have to be recognised by himself if they are to be solved (Dalin, 1978; Havelock, 1969; Havelock and Huberman, 1977; Lewin, 1991). Local people have to control innovation using local resources, participation and self-help (Havelock and Huberman, 1977; Lewin, 1991). Self-help strategies include sensitivity training, consultancy, action research, survey feedback, peer tutoring, mobilisation of resources and try-out (Dalin, 1978; Havelock, 1969).

*School-based*

Fullan (1985; 1991) emphasises the role of the school as an unit, prioritising it over individual users and individual initiatives. The *School-wide strategy* model proposes continuous empowerment through a school network at the user's school – as opposed to imported, event-based innovation such as teacher training (Fullan, 1985). Teacher education is a process and must take place in a learning continuum (Fullan, 1985, 1991). Thus

[7] According to to Hurst (1983), this type of analysis is very rare, except in Adams (1981) and Fullan (1982).

innovation in the domain of teacher education is not the transfer of knowledge, but the empowerment of the teachers through an expansion of the network. Over time this model aims for long term change (Fullan, 1991).

*Critcisms*

Although user-oriented models become more and more popular, some problems have also become apparent. User-orientation models are criticised for their reliance on inside resources to achieve innovation and change, minimising the role of outside resources (Havelock, 1969). The models often develop a ritualistic tendency and cannot deal with cost intensive problems (Fullan, 1985). Internal resources – financial and human – are especially limited in developing countries.

Another crucial problem concerns the capacity of the user to innovate and to achieve the change goals (Havelock, 1969). Teachers are often alone, struggling with their professional and instructional concerns, preoccupied with the everyday demands of school life (Fullan, 1982). Educational change depends on the actions and thoughts of these teachers (Fullan, 1991), but their capacity for initiating successful innovation is questionable. Teachers often do not see the need for the change goals advocated by outsiders, and are uncertain about what should be changed in their classroom. Some change goals proposed by outsider may neither be required nor appreciated. Even when there is a particular need, change may still occur in an unexpected direction (Fullan, 1982). Establishing the needs of teachers is not easy, and innovation as an event cannot be initiated. For teachers, innovation which adds new requirements creates further problems (Fullan, 1982). In developing countries this can further worsen the situation.

### 7.1.5 Power-oriented models

While the previous three types of orientation are based on the equilibrium paradigm, power-orientation models use the conflict paradigm. They focus on *social power.* In the group of power-oriented models there are the power-coercive model (Chin and Benne; Havelock and Huberman), the conflict/dependency approach (Hurst) and the bureaucratic (Lewin) model. The *power-coercive model* (Chin and Benne, 1969) and the *conflict/dependency approach* (Hurst, 1983) conceive innovation as a political and economic process in which power

determines implementation. The application of political, legitimate or economic power and authority force the recipients to comply with innovation. The process of change consists in the submission of the powerless to the directions of those who have greater power. To achieve change, innovations are implemented by power holders, using authority, formal procedures, clear commands, regulations and technical assistance (Havelock and Huberman, 1977). An alternative legalistic strategy is the use of bureaucratic power. The *bureaucratic model* (Lewin, 1991) achieves change through rules, regulations, administrative procedures and legal obligations, forcing power into hierarchical structures.

As all substantial change requires political and economic power, the mass of the population has to be empowered to implement change (Chin and Benne, 1969). To achieve substantial change, obsolete social structures have to be fragmented using divergent and different values (Hurst, 1983). Mass social power is indispensable for substantial change.

*Criticism*

Although this type of model considers the beneficiaries of change and aims for egalitarian and social justice, it fails to deal with cultural conflict and change (Hurst, 1983).

### 7.1.6 The relevance of different models of innovation and change to teacher development in Nepal

The present discussion of Nepal is limited to models based on the equilibrium paradigm, because, as Dalin (1978) has pointed out, the conflict paradigm has diagnostic power, but is seldom useful for the everyday management of education. Also Rodwell (1991) concludes that no practical models supporting educational innovation have been based on the conflict paradigm.

This study investigates which models of innovation and change best account for the methods for the introduction and implementation of Multigrade Teaching Training in Nepal. In a first step, the training system is examined with regard to the three orientations of change: innovation, diffusion, users. In order to investigate which type of orientation best explains the current pattern of innovation in Nepal, the following questions have been asked.

Table 7-2 Three orientations and questions to examine the innovation model of Nepal

| orientations | models | aspects | questions |
|---|---|---|---|
| innovation | research, development and diffusion, systemic/structural, scientific, systems, open-input | research | Are research methods appropriate for development? |
| | | development | How and by whom is innovation initiated? |
| | empirical-rational, innovation-focused | rational | What are the contents of the innovation messages? |
| diffusion | linkage: planned linkage | linkage | Are all relevant groups linked in the implementation process? |
| | social interaction, diffusion, diffusionism, diffusionist, charismatic | means and personnel of diffusion | How and by whom are the innovation messages diffused? What is the extent of dissemination? |
| user | normative-re-educative, phenomenological, problem-solver, problem-solving, participative problem-solving | understanding of users | Are the needs of the users being considered? |
| | | user initiatives | How are the users involved? What is the role of the users? |

As far as innovation-orientation is concerned, the quality of innovation will be examined. For this type of orientation, models are classified into two sub-groups. The first group considers the necessity of research and development to increase the quality of innovation. Thus it has to be asked for Nepal whether research is conducted, and how and by whom innovation is developed. The second group of models focuses on the rationality of innovation. Thus the contents of innovation will be examined in order to determine whether the rationality of innovation convinces the recipients.

With regard to diffusion-orientation, the methods of communication used in Nepal will be investigated. For this type of orientation, models are again classified into two sub-groups. The first group deals with linkage and relationships between the different groups participating in the development and implementation of innovation. The relationships between these groups have to be investigated in order to establish their linkage in the development and diffusion process. The second group of models focuses on the diffusion of innovation. Here it has to be examined how and by whom innovation is diffused.

For user-orientation, the needs of the recipients at the practice level, such as schools and classrooms, will be discussed following two lines of investigation. It has to be asked first whether the needs of the users are understood in the innovation process. Then it has to be assessed how the users are involved in innovation. School-based strategies have been omitted from this study, because the type of innovation evaluated in this project is an event-type innovation, i.e. something in which the teachers collectively participate for ten days.

## 7.2 Analysis of the training package of Multigrade Teaching Training

### 7.2.1 How the training package is developed

The training package for Multigrade Teaching Training, which includes training material for the trainees and a training handbook for the trainer, was developed by ten members of the Primary Teachers' Training Unit (PTTU), in co-operation with foreign and Nepalese advisors (PTTU, 1998a). The authors started preparing in 1994 and the package was finally published in 1998. The package has been used for Multigrade Teaching Training since 1999.

According to my interview with one of the authors, none of them had had teaching experience in a multigrade primary school. For instance, the author interviewed wrote parts of the first, second and fifth sections, the whole third section and the management sub-section. She has teaching experience in a monograde secondary school, but has never taught in a primary school. She also said that apart from an Irish consultant, sent by UNICEF in 1988/89, there was no expert on multigrade teaching involved in the preparation of the package.

### 7.2.2 The research conveyed for development

The authors visited multigrade primary schools during 12 days. This was done in order to observe multigrade classes and to experiment with multigrade teaching. They tried multigrade teaching in one classroom, in separate classrooms, and with separate blackboards for two or more grade groups, to find the best methods for multigrade teaching. Following this experience, three or four members of the PTTU wrote the training package. Each author wrote some sections, and the individual work was edited collectively. Pilot courses of teacher

training using the training package were run for 12 days in Kathmandu and two additional districts.

### 7.2.3 The ideal model of multigrade teaching

The training has the following four objectives (PTTU, 1998a: 1):

- To prepare or plan educational activities required for multigrade teaching
- To prepare Self-Learning Activity (SLA) required for multigrade teaching
- To manage classes in a way conductive to multigrade teaching
- To teach the students in two or more classes simultaneously

These objectives, especially points three and four, are so vague and abstract that their meaning is not clear. Moreover, the ideal model of multigrade teaching proposed in the training is not evident from these objectives. There are no additional explanations in either the training material or the handbook.

Although an ideal model of multigrade teaching, which is supposed to be transmitted by the training programme, is not evident in the training material and the handbook, the most significant notions in the training material – which give some indication about the ideal model of multigrade teaching – are probably the T, AM and AMT classes. The training material states that when two or more classes are taught by one teacher, one class should be the main class, taught by the Teacher (T class), and other classes should be additional classes, provided with SLA and supported by a Monitor (AM or AMT classes).[8] This class organisation refers to pattern three as described in Chapter Six. The training intends to promote pattern three of multigrade class organisation as a strategy for the organisation of multigrade classes.

### 7.2.4 Key concepts for multigrade teaching

The following three components, meant to assure the success of the class organisation using T, AM and AMT classes, are also highlighted in the training material (PTTU, 1998a). First,

[8] The difference between AM and AMT classes is not made clear in the training material. And neither are there supplementary explanations in the training handbook. According to the interview with one of the authors, in AMT classes the teacher is supposed to go to the class to give directions for SLA at the beginning of the lesson

the teacher is to provide 'activities given to the students in order to involve them in teaching and learning activities during the absence of the teacher from the classroom' (PTTU, 1998a: 98). These activities are called *Self-Learning Activity (SLA)* in the training material. A significant amount of the training material is devoted to SLA. According to the training material, points to be considered in the preparation of SLA include the following.

- Class, lesson and subject of SLA are to be clearly defined.
- SLA is to fulfil the objectives of the lesson.
- There should be clear instructions to indicate what has to be done.
- A number of examples are to be included.
- SLA should be structured, going from simple to complex tasks.
- The level of SLA is to be made suitable for the standard students in a class.
- SLA is to elaborate on the subject matter presented in the textbook.
- The content of SLA is to be in accordance with the local environment.
- Forms of SLA vary. SLA can consist of word cards, written instructions on the blackboard, selected activities from the textbook, problems, activities through observation, exploring, discussion, reporting, drawing, and so on.

Most of the points are the same as with ordinary tasks given to the students while the teacher is in the classroom, or tasks given as homework. The reasons for providing SLA and the amount of SLA which is to be set are not stated in the training material. The content of SLA described in the training material does not take into account the special needs of a multigrade classroom. The distinction, therefore, between ordinary tasks and SLA is not made explicit.

Second, a *monitor* should be selected from among the students of a grade group in order to take care of the class, during the absence of the teacher from the classroom, while he is teaching in another class. In order to make the students work alone, someone has to have the responsibility for getting things done. Therefore, a monitor has to be appointed and provided with clear directions as to his/her duty.

Third, there are recommendations to keep the additional class working on *group work*. The students are to be divided into groups and a group leader has to be selected for each group. A rationale for the use group work is not given.

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period, while the presence of the teacher is not necessary in AM classes. This distinction was not made by all authors, so that descriptions of AM and AMT are not coherent throughout the training material.

### 7.2.5 Model lessons for class demonstration

One of the duties of the trainer is to demonstrate a model lesson. The seventh section of the training material describes a model lesson for Grades 2 and 3. Grade 2 is treated as an AMT class doing SLA – but without a monitor and group divisions – and Grade 3 is treated as a T class. Although this model does not apply a whole content of the previous sections – monitors and group division are not used – it stresses the necessity of setting SLA for Grade 2 before passing on to teaching Grade 3.

In order to outline the model lesson, the training handbook provides only brief instructions; (1) prepare the timetable, (2) make a model lesson plan for multigrade classes and (3) construct model activities for multigrade teaching. No duration is indicated for the demonstration class. There is a note advising the trainer to have a look at the training material in order to learn how to construct the lesson plan and set SLA. Thus the training material has more details, and the training handbook in fact does not help with the demonstration of a model of multigrade teaching.

### 7.2.6 A model for Self Learning Activity (SLA)

Additionally a model for SLA is outlined in the training material. This model for SLA is suggested not only for the AMT class (Grade 2), but also for the T class (Grade 3). This creates significant confusion between SLA for self-study on the one hand and class activities with the teacher on the other. The SLA model for Grade 2 has two exercises of filling in blanks in order to complete sentences. The SLA model for Grade 3 includes four steps of instructions: (1) introduction of the lesson with pictures from the textbook, (2) reading the text, (3) distribution of flashcards to the students, and (4) questions as to the students' experience of the lesson topic. SLA for Grade 3 seems to be designed for class activity with the teacher. In the description SLA is therefore mixed up with regular class activities. This failure to emphasise the factor of self-learning complicates the understanding of SLA by the trainees.

### 7.2.7 Analysis of training material in relation to multigrade teaching

Although the Multigrade Teaching Training programme focuses on only multigrade teaching, the topics of the training material are not always directly related to multigrade teaching. Some topics concern general pedagogy rather than multigrade strategies.

Table 7-3 Relation between contents and multigrade teaching

| Days | Contents of the training material | Relation to multigrade teaching |
|---|---|---|
| 1 | types of teaching | √ |
| | various stages of multigrade teaching | √ |
| | special needs of multigrade teaching | √ |
| 2 | time table | √ |
| | classroom management | √ |
| | student management | √ |
| | evaluation and examination | |
| | student records | |
| 3 | teaching plan | √ |
| | multigrade teaching methods | √ |
| | activities for creative activity | |
| 4 | source of teaching | |
| | skills | |
| 5 | constructing SLA | √ |
| 6 | use of SLA | √ |
| 7 | model demonstration class, observation form | √ |
| 8, 9 | micro teaching | √ |
| 10 | review | √ |

Table 7-3 examines whether each topic is directly related to multigrade teaching. The topics of the first section are all directly linked to multigrade teaching. The first section gives an introduction to multigrade teaching and gives an idea of what multigrade teaching means. The topics of the second section are also mostly relevant to multigrade teaching, introducing multigrade teaching strategies, including the production of a special timetable for multigrade classes. However, evaluation, examination and the keeping of student records are rather common issues which equally concern monograde teaching. The third section starts with multigrade teaching planning and multigrade teaching techniques, but the central argument of the section is concerned with general, monograde pedagogical issues. The fourth section has nothing on multigrade teaching, but explains how to generally use the blackboard and textbooks. The remaining sections focus on the practice of multigrade teaching, this practice is not concerned with the question of how to deal with multigrade teaching on a conceptual level.[9]

[9] There are of course reasons why some topics are not directly related to multigrade teaching. First, multigrade class organisation is a more obvious focus of the programme, because of the fact that two or more classes are

### 7.2.8 Structure of the training material

The training material is divided into ten sections. Each section is to be covered in one day. The first four sections are more theoretical than the last six sections. The sections from the sixth onwards are even more practical. For instance the last three sections are spent with a demonstration class and practice teaching. In order for the trainees to observe the demonstration and practice teaching of others, an easy to understand observation form is included.

The training material is in general well structured, with 'introduction', 'concepts of multigrade teaching' – including strategies, techniques and teaching resources, with a special emphasis on SLA – 'practice' and 'conclusion'. However, the training topics are not always organised systematically. There is no total coherence across all the training material. Some topics are repeated several times and others overlap. For example, 'introduction of multigrade teaching' is part of the first section, but another introduction on multigrade teaching appears in the third section. As a second example, SLA is introduced, with similar explanations, in the second, third, fourth, fifth and sixth sections. Similarly, the terms T, AM and AMT are introduced, with only slightly different explanations, in the second and third sections.[10]

### 7.2.9 Style of the training material

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managed by one teacher; the necessity to adapt class organisation to this is obvious. However, specific teaching for multigrade classes is more difficult to define, because each grade group is seated in a different classroom and lessons for them are conducted individually; i. e. teaching and learning activities are still organised grade-wise. Second, the authors of the training material are aware of only monograde pedagogy. They therefore tend to write about pedagogical issues always in relation to monograde teaching. Third, the author interviewed stated that most primary school teachers do not have any general pedagogical knowledge, so that the training programme is intended not only for multigrade teaching, but also tries to cover teaching in general. Consequently the material labelled as for multigrade teaching training, does not exclusively concentrate on multigrade teaching.

[10] Overlapping and insufficient explanations are probably caused by the fact that different authors were responsible for different sections, with the responsibility of each author not clearly deliminated. The difference, for example, between the topics 'multigrade teaching programme' in the second section, 'teaching techniques' in the third section and 'skills for teaching' is not obvious, and the topics of different authors seem to overlap. It is understandable that the training emphasises SLA, so that there are separate sections for SLA. However, since SLA is part of the techniques for multigrade teaching, the authors of the sections on 'techniques' also cover SLA. On the other hand, some fundamental definitions are totally missing from the training material, because the responsibility for each section was not made clear. Hence explanation on some topics appears here and there

The overall style of the training material changes between the fourth and fifth sections. This change also causes a change in the style of the instructions of the training material. The sections from one to four include exercises called 'Activities.' Often questions are asked in these Activities. With the change in the format of the training material, sections five onwards do no longer include Activities. Only one set of instructions on how to set SLA and practice its use is given in the sixth section. Precise instructions for tasks to do by the trainees are not given in the seventh, eighth and ninth sections.

Tasks in sections five to nine are more practical and require the active participation of the trainees. However, these sections do not provide clear directions on how to the trainers and trainees are to conduct these practical activities. Although the theoretical part in the first four sections of the training material provides lots of explanations of concepts, the practical part of the training material does not provide sufficiently clear instructions. Even though the trainer and the trainees may understand the concepts with the explanations in the first four sections, the training material partly fails in making them practice what they learnt.

### 7.2.10 Quantitative volume of sections

The training material comprises 105 pages. Table 7-4 shows the distribution of pages across all sections. Although every section is supposed to be dealt with in one day, different sections are of different length. The first section has 10 pages, but the second to fourth section have each more than 20 pages. From the fifth section onwards, there are only a few pages per section. Parallel to the decrease in length of the sections, there are also less exercises and activities. During 'practice teaching' several trainees demonstrate their teaching, which means that not too much instruction is needed for the eighth and ninth section. The seventh section consists of only a 'model demonstration class', presented by the trainer. This is not sufficient content to cover a whole day. The training contents are not distributed appropriately across the length of the training programme.

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throughout the training material. Because of the unsystematic organisation of the training material, it is very difficult to understand the intentions of the training.

Table 7-4 Distribution of the training material

| Sections | Topics | Pages | number of pages | number of activities |
|---|---|---|---|---|
| 1 | Types of teaching | 1-2 | 10 pages | 11 |
| | Various situations of multigrade teaching | 3-4 | | |
| | Reasons for multigrade teaching | 5-9 | | |
| | Conditions of multigrade teaching | 10 | | |
| 2 | Timetable (AMT) | 11-16 | 24 pages | 20 |
| | Classroom management | 16-20 | | |
| | Student management | 20-26 | | |
| | Evaluation and examination | 26-29 | | |
| | Student records | 29-34 | | |
| 3 | Lesson plans (AMT) | 35-40 | 25 pages | 10 + other exercises |
| | Multigrade teaching techniques (SLA, AMT) | 40-55 | | |
| | Recreational and creative activities | 55-59 | | |
| 4 | Teaching resources (SLA) | 60-80 | 23 pages | 16 |
| | Skills for teaching | 81-82 | | |
| 5 | Construction of SLA | 83-84 | 2 pages | 0 |
| 6 | Use of SLA | 85-87 | 3 pages | 1 question |
| 7 | Model demonstration class | 88-97 | 10 pages | 0 |
| 8 and 9 | Practice teaching | 98-101 | 4 pages | 0 |
| 10 | Review | 102-103 | 2 pages | 7 questions |

### 7.2.11 Analysis of training material in relation to local context

The training material is not adjusted to the real conditions of multigrade teaching in the two districts. First, multigrade classes as shown in the training material are taking place in a large, well decorated classroom, with tables or space for group work (PTTU, 1998a: 10, 26, 29, 31, 51 and 88). However multigrade schools visited for the case studies have tiny, dark and plain classrooms with heavy furniture arranged in rows. Second, various teaching materials are presented in the programme and it is suggested to trainees that they produce personal material, like for example templates (PTTU, 1998a: 26, 88 and 100). However, the schools visited are hardly equipped with even stationary. Third, it is recommended that the blackboard should be partitioned for each grade (PTTU, 1998a: 26). However, some schools have tiny blackboards of only 160 square centimetres. Fourth, detailed instructions are given for the organisation of assemblies (PTTU, 1998a: 53-55). However, none of multigrade schools visited during the case studies organises assemblies.

### 7.2.12 Training handbook for the trainer

The handbook provides no more than a repetition of almost the same content as is already in the training material. It does not provide especially helpful guidelines for the trainer on how to conduct the training. There are, however, two significant instructions for the trainer which are not included in the training material. One is about the 'observation form.' The training handbook instructs clearly the trainer to provide clear explication of the observation form and make the trainees to fill up the form when they observe others. Unfortunately it does not include the explication about the form for the trainer so that the trainer hardly understands the form enough to explain to the trainees. There are also instructions for 'supervision' after the completion of the training. The tenth section of the handbook requires the trainer to make, in co-operation with the trainees, a supervision plan to check on their performance after the training (PTTU, 1998b). It is further suggested to the trainer to fill in an observation form during school visits and give oral or written feedback to the trainees. If necessary the trainer is supposed to demonstrate a model lesson in the school of the trainee.

## 7.3 Analysis of the cascade system of Multigrade Teaching Training

### 7.3.1 Effectiveness of the cascade system

To train the people who will train teachers can be very time-consuming (Beeby, 1966). A cascade model can deliver a large number of trained teachers relatively quickly and reduces the cost of training. Cascade model means that the 'training messages flow down from experts and specialists through several layers of personnel and eventually to the teachers' (Dove, 1986: 230). It has been used for many years, particularly in industry and commerce, as a strategy for training large numbers of people within a limited period of time (Department of Education and Science, 1988). It has impressive multiple effects and is economical with regard to material and training. It is suitable for staff development and the training of facilitators (McDevitt, 1998).

Despite its advantages, the cascade model is often criticised. Its main weakness is the distortion of the messages transferred during the training, because they are passed down through many different levels of personnel. The intended messages are often altered and their

effects are diluted through miscommunication and different interpretations of the same messages (Mpabulungi, 1999). The cascade model envisages a series of consecutive training processes. The participants are constantly changing in the process (McDevitt, 1998). Each training takes place as a result of the previous one, in principle imparting an agreed and consistent body of knowledge, skills and attitudes, but evaluation studies in the UK reveal that there is no continuity within a three-layer cascade model. Training plan and guidelines are only loosely followed in the processes of the training. Often different strategies are adopted and new elements are introduced (Department of Education and Science, 1988). In order to avoid this, the messages must be simple, as well as clear enough to be understood at all levels (McDevitt, 1998). Otherwise, received imperfectly at one level they become contorted or are ignored on subsequent levels.

The second weakness of the model is the distance between the central and the local level. McDevitt, (1998: 427-428) concludes that 'if you are too far away from the source, you cannot get soaked.' Additionally, there are few opportunities to check process and outcomes of each stage (McDevitt, 1998). The evaluation study of a three-layer cascade model in Uganda indicates problems especially at the lowest level (Mpabulungi, 1999). The trainers for the training at the lowest level had not internalised the messages from their own training. Consequently, they could not perform well for some steps of the training contents.

A third limitation is one-way transmission. The cascade model is constructed according to a centre-periphery and top-down structure, so that it is too inflexible to respond to the needs at grassroots level (McDevitt, 1998). Additionally, the higher levels often lack experience of primary school teaching (Dove, 1986). This makes it difficult to predict the needs of the lowest level and widens the gap between levels. According to final evaluation at the lowest level for a cascade model in Botswana, the training was too much focused on what is already known, and finished by being not very useful. The study in Botswana reveals that the cascade model fails to be a means of transferring ideas or of changing behaviour, because it has little impact on commitment (McDevitt, 1998). A process of justifying or validating communicated ideas is needed in order to transfer new ideas which are perceived and comprehended (Mezirow, 1991). A top-down approach does not encourage participation and commitment. Consequently a justification of the new ideas which need to be transferred in order to change behaviour hardly takes place.

Some researchers believe that this failure lies with the cascade model itself (McDevitt, 1998). Others argue that the quality of a cascade model depends on the quality of planning and implementation, rather than on inherent weaknesses of the model itself (Department of Education and Science, 1988). To run a successful cascade model, the trainees and their needs are to be well defined. Clear training objectives are to be set, supported by high quality, consistent training material. The trainers are to be carefully selected for their competence as trainers and their understanding of the particular knowledge and skills which are to be transferred. The role and function of each actor needs to be defined. Each stage has to provide sufficient time for trainers to prepare, and for trainees to absorb the messages. Each stage should be well structured, and any ambiguity in training objectives and materials has to be removed in order to avoid the risk of personal interpretations (Department of Education and Science, 1988). Mpabulungi (1999) concludes that cascade training is only effective if the trainers are fully familiar with the practice and not only the theory, and sufficient time is given to the trainers to acquire new knowledge. The training process should be supervised to ensure the following of training procedures.

### 7.3.2 How the messages are diffused in Nepal

Table 7-5 Structure of Multigrade Teaching Training in the cascade system

| training | levels | trainers | trainees | duration |
|---|---|---|---|---|
| MTOT | zones | section officers from PTTU | selected school supervisors and resource persons | 1.5 day |
| DTOT | districts | school supervisors and resource persons who have attended MTOT | other school supervisors and resource persons | 4 days |
| RCT | resource centres | school supervisors and resource persons who have attended DTOT | primary school teachers | 10 days |

Multigrade Teaching Training in Nepal is organised in a three-layer cascade system (Table 7-5). First, for one and half days in January 2001, Master Training of Trainers (MTOT) was organised in six cities across Nepal. Nuwakot and Kavre districts were included with MTOT held in Chitowan district. A section officer from PTTU was the master trainer. Three School Supervisors or Resource Persons from six districts participated as trainees. In relation to our

study it can be noted that two Resource Persons and one School Supervisor from Nuwakot district and three School Supervisors from Kavre district participated as trainees.

In a second step, District Training of Trainers (DTOT) was organised at district level. For four days in May 2001, School Supervisors who had attended MTOT conducted DTOT for Resource Persons in Kavre district. Nuwakot district did not organise DTOT in that year, because the district had training experience already.

As a third step, School Supervisors and Resource Persons who have attended MTOT or DTOT hold Resource Centre Training (RCT) for primary teachers. Training lasts for ten days and takes place in the Resource Centres. In both Kavre and Nuwakot district, RCT was held during the summer vacation of June/July 2001.[11]

### 7.3.3 Trainers

*Master Training of Trainers (MTOT)*

The master trainer for MTOT holds a Master of Education (MEd) degree and has teaching experience in a monograde secondary school. However, he has never taught in a primary school and does not have teaching experience in multigrade teaching. He has some experience as a trainer, having been trainer for the 10-month training, distance education training and curriculum dissemination training. Although he has never organised Multigrade Teaching training, he has observed Multigrade Teaching training at DTOT and RCT levels two years ago.

*District Training of Trainers (DTOT) in Kavre district*

Of the two School Supervisors who have attended the MTOT, one holds a Bachelor of Education (BEd) degree and is currently studying for an MEd degree. He has had teaching experience in a monograde secondary school for 5 to 6 months. However, he has never taught in a primary school and does not have teaching experience in multigrade teaching. He has been School Supervisor for five years. The other School Supervisor holds a Bachelor of Commerce (BCom) and a BEd degree, and is currently studying for an MEd degree. He does not have any teaching experience in schools. He has been School Supervisor for eight years.

*Resource Centre Training (RCT) in Nuwakot district*

There are three trainers for RCT at Trisuli RC, Nuwakot district. First there is the Resource Person who took MTOT in the same year. He has already supervised another RC in the district for five years. He holds a BEd degree and is currently studying for an MEd degree. He has had teaching experience in a multigrade primary school with 5 grades and 3 teachers for five years. Second there is a Resource Person with nine years of experience who took MTOT the previous year. He also supervises another RC in the district. He holds a BEd degree. He has nine years of teaching experience in primary schools and multigrade teaching experience of one year. Finally there is the head teacher of a secondary school who took DTOT in the same year. He is currently teaching monograde classes at secondary school.

*Resource Centre Training (RCT) in Kavre district*

The trainer at the RC is the headmaster of a secondary school. His school is a monograde school, and he is currently teaching at secondary level. He holds a BEd degree. He has seven years of teaching experience in primary schools, including 4-5 years of multigrade teaching. He has taken DTOT in the same year in order to conduct the RCT. He has attended DTOT for the first time, and this training course is his first experience as a trainer.

### 7.3.4 Diffusion of training courses

In terms of numbers, Nepal has been successful in substantially expanding the diffusion of training courses (Table 7-6). At the national, the MTOT level, only six master trainers are engaged in the diffusion of the training programme. Master trainers reach a considerable number of subordinate trainers. One master trainer in Chitwan district, for example, has passed on the training contents to 21 trainees, including three trainees from Nuwakot district and three from Kavre district. Two of the three trainees from Kavre district who have attended MTOT, have themselves conducted DTOT for 32 resource person-trainees. Eight of these 32 resource persons have organised RCT in their RCs. One RCT trainer in this study has passed on the training contents to 33 teacher-trainees (31 trainees actually in attendance). In Nuwakot district, five trainers have organised RCT. Three trainers have conducted training for 75 teacher-trainees (with 67 trainees actually attending). This means that the cascade

[11] The new academic year 2001/02 starts in July in Kavre district and in August in Nuwakot district.

system effectively allows the diffusion of training contents from the central level to the teachers.

Table 7-6 The expansion of the training in terms of the number of trainees

| training | districts | trainers | trainees | | |
|---|---|---|---|---|---|
| | | | Kavre | Nuwakot | total |
| MTOT | Chitwan | 1 (6) | 3 | 3 | 6 (21) |
| DTOT | Kavre | 2 (2) | 32 | - | 32 (32) |
| RCT | Kavre | 1 (8) | 33 (targeted)<br>31 (trained) | - | 108 (targeted) |
| | Nuwakot | 3 (5) | - | 75 (targeted)<br>67 (trained) | 98 (trained) |

## 7.4 Trainees of Multigrade Teaching Training

### 7.4.1 Characteristics of the trainees

In Nuwakot district, all the 75 public primary teachers who fall under the responsibility of Trishuli Resource Centre (RC) were called up for training. As Headmaster training was held at the same time, no headmasters/headmistresses participated in the Multigrade Teaching Training. The teacher-trainees were divided into three groups. In Nuwakot district, many trainees had already received at least ten weeks of residential training. Some of them had also received Multigrade Teaching Training. Table 7-7 shows that only 8 out of 73 trainees had received Multigrade Teaching Training previously. Therefore, the majority followed Multigrade Teaching Training for the first time.

Table 7-7 Number of trainees who had Multigrade Teaching training before

| Nuwakot district | number of teachers |
|---|---|
| trainees who had Multigrade Teaching training previously | 8 |
| total number of the trainees who answered the relevant question | 73 |

In Kavre district, all 44 public primary teachers, including headmasters/headmistresses, falling under the responsibility of Sunthan RC were called up for training. Of those, 33 teachers actually participated in the training. Thirty-one trainees answered the questionnaire. These 31 trainees include 10 headmasters/headmistresses (Table 7-8). Some of the trainees

had received already the basic primary teacher training, but none of them had received Multigrade Teaching Training.

Table 7-8 Number of headmasters and headmistress among the trainees

| Kavre district | number of teachers |
|---|---|
| trainees who are headmaster or headmistress | 10 |
| total number of the trainees who answered the relevant question | 31 |

Of the 108 trainees (75 for Trishuli RC and 33 for Sunthan RC) who participated in the training, 104 trainees (73 for Trishuli RC and 31 for Sunthan RC) filled in the questionnaires on the first day and/or the self-evaluation forms on the last day of the training. Table 7-9 shows that there are three types of teachers among the trainees. First, there are the teachers who are currently working in multigrade schools and will continue to teach multigrade classes after the training. A second type is constituted by those who used to work in multigrade schools, but are currently working in monograde schools. They have experience of multigrade teaching, but they will teach monograde classes after the training. The third type concerns those teachers who are currently working in monograde schools and have never taught multigrade classes. In this study, the first type is called multigrade teachers, the second multigrade-experienced teachers and the third monograde teachers.

Table 7-9 Number of trainees and number of multigrade teachers[12]

| districts | multigrade | experienced | monograde | total |
|---|---|---|---|---|
| Nuwakot | 18 | 21 | 34 | 73 |
| Kavre | 14 | 9 | 8 | 31 |
| total | 32 | 30 | 42 | 104 |

| districts | multigrade | experienced | monograde | total |
|---|---|---|---|---|
| Nuwakot | 24.65% | 28.76% | 46.57% | 100% |
| Kavre | 45.16% | 29.03% | 25.80% | 100% |
| total | 30.76% | 28.84% | 40.38% | 100% |

Note: Multigrade: teachers who are currently working in multigrade schools. Experienced: those who used to work in multigrade schools, but are currently working in monograde schools. Monograde: those who are currently working in monograde schools and have never taught multigrade classes.

At the RCT of Nuwakot district, 25% of the 73 trainees were multigrade teachers, 29% were multigrade-experienced teachers, and 47% were monograde teachers. In other words, only a quarter of the trainees are currently multigrade teachers. At the RCT of Kavre district, 45%

of the 31 trainees were multigrade teachers, 29% were multigrade-experienced teachers, and 26% were monograde teachers. There are more multigrade teachers than in Nuwakot district, but they represent still less than half the total number of trainees.

Of the overall 104 trainees in both districts, 31% are currently multigrade teachers, 29% are multigrade-experienced and 40% are monograde teachers. In other words, only less than one third of the trainees are multigrade teachers. Considering the current posting of the teachers, 69% of the trainees are working in monograde schools. They will not teach multigrade classes after the training. Indeed, they do not need to learn about multigrade teaching for the moment.

### 7.4.2 How the trainee-teachers are involved

The decision on the selection of training modules has been decentralised, passing from the central government level to the district level. Likewise, until 1997/98, the selection of trainee-teachers for training was decided by the PTTU which has also been responsible for distributing training packages to the districts. The system has been changed in 1998/99. Now the decision is made by the districts, based on local needs, and packages are distributed by the PTTU according to the demand from each district.

### 7.4.3 The role of teachers in the implementation of the training programme

Although the initial top-down approach has been modified to a demand-based system at district level, decentralisation has stopped with the DEOs. Teachers are not involved in decisions making concerning the implementation of the training programme. The training needs of the district are decided at the DEO, without consultation of the teachers. The decision of Nuwakot and Kavre districts to hold Multigrade Teaching Training for example is based on the realisation by the DEO that there are many multigrade schools in the districts. When allocating training slots to teachers the principle of equal opportunities for teachers to receive training is taken into consideration.

[12] The trainees shown in this table were those who filled in the questionnaires on the first day and/or the self-evaluation forms on the last day of training.

## 7.5 Conclusion

This chapter has analysed Multigrade Teaching Training in order to identify which orientation best characterises its model of innovation and change. The training material has been investigated for a possibility of innovation-orientation. The cascade system has been examined to check for the possibility of diffusion-orientation. Finally the involvement of teachers has been analysed to assess the possibility of user-orientation.

In conclusion, an innovation-orientation of the programme is barely perceptible. Systematic research for the development of the training programme has not been conducted in Nepal. The authors of the training material have visited multigrade primary schools for 12 days, observed multigrade classes and done some experiments on multigrade teaching. Although these visits have included class observation, they were far from 'scientific and systematic research.' No research report has been produced. As a result, the training material which has been developed remains vague and incoherent in its content, structure and style. Its authors do not develop an explicit ideal model of multigrade teaching. Different authors write different things. With regard to the different patterns of multigrade teaching identified in Chapter Six, the training programme fails to refer to any local teaching-learning context. Overall the innovation aspect of the training is not rationally grounded.

To speak of user-orientation is also not appropriate. The training does not take into account the needs of the trainees. Only a quarter of the trainees in Nuwakot district were current multigrade teachers. In Kavre district still less than half of the trainees were multigrade teachers. Training is provided based on a principle of equal opportunities for teachers, not on a consideration of their needs. The national training policy has tried to shift the distribution of training opportunities from a supply-oriented to a demand-based system. In this context decision making concerning the training packages has been decentralised from the central government level to the districts. However this change in policy has not reached the teachers. Teachers are still barely involved in the implementation of the training programme. Teacher training in conclusion does not appear to be oriented towards the needs of its users.

The research presented in this chapter comes to the conclusion that the Multigrade Teaching Training in Nepal is diffusion-oriented. The training programme is diffused through a

cascade system. A systematic structure with three layers of training – MTOT, DTOT and RCT – has been developed. This study observes how training diffuses from one master trainer to 98 teachers trained in two resource centres of two districts. We can assume that with six master trainers diffusion reaches a large number of teachers in the 75 districts of Nepal. The training is thus clearly identifiable as diffusion-oriented.

Table 7-10 Summary of orientations explaining the training model of Nepal

| orientations | answers | questions |
|---|---|---|
| innovation | | Is research targeted at development? (preparation)<br>How and by whom are innovation contents developed? (process)<br>What is the content of the innovation messages? (outcome) |
| diffusion | √ | Is there a linkage between various participants in training implementation? (preparation) |
| | √ | How and by whom are messages diffused? (process) |
| | √ | What is the extent of dissemination of contents? (outcome) |
| user | | Are the needs of the users considered? (preparation)<br>How are the users involved? (process)<br>What is the role of the users? (outcome) |

The results of this chapter are summarised in Table 7-10, showing how the implicit model of Multigrade Teaching Training in Nepal is diffusion oriented. Chapter Eight will further evaluate the cascade system of the Multigrade Teaching Training to identify more specific models within the diffusion-oriented framework. The following three chapters will investigate the effectiveness of diffusion-oriented training (Chapters 8 to 10). Finally I am going to analyse which models could be more effective in the context of Nepal (Chapter 11).

# Chapter Eight
# Input Evaluation of Multigrade Teaching Training

Chapter seven has established that Multigrade Teaching Training is diffusion-oriented. Central to this diffusion is the cascade system. This chapter evaluates the cascade system of Multigrade Teaching Training. Input evaluation is used to identify more specific models within the diffusion-oriented model and to investigate the effectiveness of diffusion-oriented training. The first section analyses the relationships between the people who diffuse the training contents through the cascade system. The second section assesses the extent of diffusion with specific attention to the precise content of training, passing from the central to the district level. The third section assesses the way how diffusion works as part of the cascading system, comparing training activities at each level. The fourth section assesses to what extent the training messages are finally diffused down to the practical teacher level.

## 8.1 The linkage in the cascade system

Table 8-1 summarises background information of the trainers from PTTU to RC level. Although all trainers have high qualifications and most of them have teaching experience – as well as experience as a trainer – there are differences between DTOT and RCT. While all trainers above DTOT level have higher qualifications, none of them has teaching experience in a primary school. Their knowledge of multigrade teaching is theoretical, rather than based on their own experience.

RCT trainers on the other hand normally have teaching experience in multigrade primary schools. Three out of four RCT trainers in the study have this teaching experience. They are not only trainers, but at the same time Resource Persons or headmasters who are familiar with real practice in the schools. The RCT trainers have knowledge on multigrade teaching from their own experience.

Table 8-1 Background information on trainers in Multigrade Teaching Training

| | status | place | qualifications | experience in multigrade teaching | teaching experience | experience as a trainer |
|---|---|---|---|---|---|---|
| author of the training package | section officer | PTTU | MEd | no | 2 years in monograde secondary school | yes |
| MTOT trainer | section officer | PTTU | MEd | no | monograde secondary school | yes |
| DTOT trainer A | school supervisor | Kavre | BEd | no | 5-6 months in monograde secondary school | not available |
| DTOT trainer B | school supervisor | Kavre | BEd and BCom | no | no | not available |
| RCT trainer A | resource person | Nuwakot | BEd | 5 years | 5 years in primary school | yes |
| RCT trainer B | resource person | Nuwakot | BEd | 1 year | 9 years, including primary school | yes |
| RCT trainer C | vice-headmaster | Nuwakot | n/a | n/a | n/a | yes |
| RCT trainer D | headmaster | Kavre | BEd | 4-5 years | 7 years including primary school | no |

## 8.2 Training plan for Master Training of Trainers (MTOT)

All the six master trainers of MTOT, as well as the author of the training package interviewed for this study, held a meeting at the PTTU just before the start of MTOT. They discussed and tried to clarify possible points of confusion. The master trainer of Chitwan district prepared the training plan for the MTOT for Multigrade Teaching. He asked for suggestions from the author, and the author selected significant issues from the training material which should be included in MTOT.

According to the training plan, the objectives of MTOT are as follows:

- To define the position and the use of multigrade teaching
- To assess the present situation in multigrade schools
- To make plans for multigrade teaching according to the number of students
- To develop SLA
- To manage a class in the absence of the teacher
- To evaluate students in multigrade teaching

These objectives are intended to train the MTOT trainees rather with regard to the content of the training than with regard to the conduct of the training. Due to the characteristics of the objectives, training activities listed in the training plan are as follows:

- Warm up activities
- Reasons for multigrade teaching
- Present situation of multigrade teaching
- Teaching methods and timetable
- Student evaluation
- Simulation of multigrade teaching

These topics are an executive selection from the training material.

8.3 Structural gaps in the cascade system

When comparing the three different levels of the training, it is possible to observe an important change in the structure of the training between DTOT and RCT levels. This is in terms of duration, aims, coverage of the training material, and physical conditions at each level.

Table 8-2 Training material covered by each trainer

| days | | MTOT | DTOT Kavre | RCT Nuwakot | RCT Kavre | Relation to multigrade teaching |
|---|---|---|---|---|---|---|
| 1 | types of teaching | | | √ | √ | √ |
| | situation of multigrading | √ | √ | √ | √ | √ |
| | need for multigrade teaching | √ | √ | √ | √ | √ |
| 2 | time table | √ | √ | √ | √ | √ |
| | classroom management | | | √ | √ | √ |
| | student management | | | √ | √ | √ |
| | evaluation and examination | | | √ | √ | |
| | student records | | | √ | √ | |
| 3 | lesson plans | | | | | √ |
| | multigrade teaching methods | | | | | √ |
| | activities for creative activity | | | √ | √ | |
| 4 | resources for teaching | | √ | √ | √ | |
| | skills required for teaching | | √ | √ | √ | |
| 5 | setting SLA | √ | √ | √ | √ | √ |
| 6 | use of SLA | √ | √ | | √ | √ |
| 7 | demonstration class | √ | √ | √ | √ | √ |
| 8, 9 | practice teaching | √ | √ | √ | √ | √ |
| 10 | review | | | √ | √ | √ |

Note: MTOT takes 1.5 day, DTOT 4 days and RCT 10 days.

The duration of each training programme differs. The duration of MTOT is 1.5 days, DTOT takes 4 days and RCT 10 days. The whole training material is to be covered in ten days, but only 1.5 days are available for MTOT. The MTOT trainer restructures the training material, intended for 10 days, and compresses the training content from 10 to 1.5 days. In other words, he produces a miniature version of the 10-day training. The aim of MTOT is to highlight significant points in the training material. Since the MTOT trainer shortens the 10-day training to 1.5 day, the coverage of content is limited (Table 8-2). He selects seven topics which he thinks most significant for multigrade teaching, to be treated during the 1.5 day period of training. Timetable and SLA are considered especially important. Thus a great deal of time was spent with those topics.

DTOT trainers followed a programme with the same characteristics, duplicating the structure of MTOT and just extending it from 1.5 to 4 days. They covered the same topics in the same order as MTOT, extending the length of training by 2.5 days. Two topics were added to the training contents of MTOT to fill 4 days. The topics added during the additional 2.5 days were selected from non-multigrade teaching–related topics familiar to the trainers.

The structure of RCT on the other hand is completely different from the upper levels. Unlike MTOT and DTOT trainers, RCT trainers need to cover all topics of the training material, not only selected topics. Their aim is to finish the training material in ten days. Table 8-2 shows that RCT trainers cover most of the training material.

Physical conditions also change between MTOT and DTOT on the one hand and RCT on the other hand. There were large tables for group work during MTOT, making it possible to follow the instructions of the training material. The same kind of furniture was used for DTOT. For RCT however there are only tiny rooms with inappropriate furniture which make it difficult for RCT to follow the examples of the upper levels.

## 8.4 Knowledge transfer by the trainers

Table 8-3 shows how the intended ideal model of multigrade teaching is cascaded down from the model of the training material to the model of RCT trainers, showing how the trainer and the trainees practically conduct multigrade teaching during training.

Table 8-3 Model teaching by the trainer and practice teaching by the trainees

| | duration of lessons (minutes) | class organisation | SLA | monitor | directions to the monitor | answer keys | group work | check | lesson plans |
|---|---|---|---|---|---|---|---|---|---|
| model teaching in the training material | not mentioned | AMT, T classes | √ | √ | √ | | √ | | √ |
| MTOT trainer | 21 | AMT, T classes | √ | √ | √ | √ | √ | √ | |
| MTOT trainees 1 (RCT trainer A) | 15 | AMT, T classes | √ | √ | √ | √ | √ | √ | |
| MTOT trainees 2 | 16 | AMT, T classes | √ | √ | | | | √ | |
| MTOT trainees 3 | 18 | frequent visits | √ | √ | | | √ | √ | |
| DTOT trainer B | 27 | AMT, T classes | √ | √ | √ | √ | | √ | |
| DTOT trainee 1 | 26 | AMT, T classes | √ | | | | | √ | |
| DTOT trainee 2 | 13 | AMT, T classes | √ | √ | | | | √ | |
| DTOT trainee 3 | 15 | frequent visits | √ | | | | | √ | |
| DTOT trainee 4 (RCT trainer D) | 19 | frequent visits | √ | √ | | | | √ | |
| DTOT trainee 5 | 29 | frequent visits | √ | | | | | √ | |
| RCT trainer A | 10 | AMT, T classes | √ | √ | √ | √ | | √ | |

The messages of the training material are distorted while being transferred down from MTOT. There is already a difference between the theoretical model outlined in the training material and the model lesson of the MTOT trainer. Giving the answer keys to the monitor and checking on the class at the end of the lesson are not mentioned in the material. This can be explained by the fact that the model plan in the teaching material itself lacks some points mentioned in other parts of the material. Since the MTOT trainer has to select topics and issues from different parts of the material anyway, he rather combined concepts selected by himself instead of following the instructions for model teaching in the section on the demonstration class. As a result, his model lesson is rather his own original blend of concepts for multigrade teaching.

During MTOT, trainee 1 (RCT trainer A) managed to duplicate the model lesson of the MTOT trainer, but others failed in duplicating it and missed some concepts. All of the

trainees included SLA and a monitor in their practice teaching. However although they appointed a monitor, two trainees did not give instructions to the monitor so that the monitor in fact did not function. The trainees learned about the monitor system, but whether they understand its function is questionable. AMT and T classes are the major component of the training. However, even though one trainee did not follow the model but visited the two classes frequently, the trainer did not correct his error.

DTOT produces results similar to MTOT. However the quality of duplication by the trainer of the model lesson in the teaching material decreased. Group work has totally disappeared in DTOT. Three out of five trainees did not follow the AMT and T class system, but visited the two classes frequently. Again the trainer did not correct their errors.

Although the message becomes distorted, there is still some transfer achieved, especially the notion of responsibility for two grades during one lesson period. All the trainees provided SLA and checked student work at the end of the lesson. Most of the trainees appointed a monitor, although this remained unsystematic.

## 8.5 Conclusion

This chapter has evaluated the cascade system of Multigrade Teaching Training, identifying specific models within the diffusion-oriented model and investigating the effectiveness of diffusion-oriented training. The relationships between those who diffuse training contents through the cascade system, the ways how messages are diffused and the question of which training messages are finally diffused successfully were examined.

*Models of innovation and change relevant to Multigrade Teaching Training*

As outlined in Chapter Seven, Multigrade Teaching Training diffuses the training messages using a network of education officers and teachers. The structures of the cascade system are well developed. The training material includes opportunities for feedback and follow up activities. This implies that the training programme pays indeed considerable attention to how training contents can be diffused successfully.

By contrast, a charismatic model is not apparent in Nepal, because no particular charismatic person can be identified. Linkage models are also not appropriate to describe the present

situation. Although the people involved are administratively linked from the top to the bottom, smooth collaboration between them is difficult because of their different status and resulting differences concerning the value of multigrade teaching and its understanding. In the administrative structure, there is a gap between DTOT and RCT trainers, although all trainers hold high qualifications, and most of them have teaching experience and experience as a trainer. While all trainers above DTOT level hold higher qualifications, none of them have teaching experience in primary schools. They know about multigrade teaching only theoretically, not by personal experience. On the other hand, RCT trainers generally have teaching experience in multigrade primary schools. Indeed, the three RCT trainers of this study have this kind of teaching experience. They are at the same time Resource Persons or headmasters who are familiar with the real practice in the schools.

As summarised in Table 8-4, Multigrade Teaching Training in Nepal is best described by models which emphasise the question of how to diffuse innovation. These models include social interaction, diffusion, diffusionism and diffusionist models.

Table 8-4 Models of various types of diffusion

| Models | Aspects | Questions | Answers |
|---|---|---|---|
| linkage; planned linkage | linkage | Are the people involved linked effectively to facilitate diffusion? | |
| social interaction; diffusion; diffusionism; diffusionist; | method of diffusion | Are the messages diffused by effective methods? | √ |
| charismatic | person responsible for diffusion | Is there any charismatic person? | |

*The effectiveness of the cascade system*

Multigrade Teaching Training diffused the training messages but it failed to diffuse the training messages effectively. The messages of the programme were distorted in the cascade system. There was already a difference between the model outlined in the training material and the model lesson of the MTOT trainer. Yet, *provision of SLA, nomination of a monitor and checking on student work at the end of a lesson* were transmitted by the cascade system. The major achievement of cascading was the recognition by the trainees that they were responsible for two grades. However, the impact of this was superficial and the transferred knowledge was not always meaningful. Some trainees did not acquire the key concepts, because the trainers did not correct their errors. Others did adopt the key concepts, but for

example the quality and amount of SLA are still not appropriate. The monitor system and group work lacked effective functions.

One of the reasons why messages were distorted is a significant difference in the structure of the training between MTOT/DTOT levels on the one hand and RCT on the other. In the administrative structure, there was a gap between DTOT and RCT trainers in terms of qualifications, teaching experience and experience as a trainer. There was also a gap in terms of the duration of the training, its aims and coverage of the training material. MTOT trainer condensed the 10-day training into 1.5 days. He highlighted the significant points of the training material. DTOT trainers teach in the same way, duplicating the structures of the training, but using 4 instead of 1.5 days. They covered the same topics as MTOT, – and in the same order – just extending the volume of the training by 2.5 days. By contrast, the structure of RCT was completely different from the other levels. Unlike MTOT and DTOT trainers, RCT trainers needed to cover all the topics of the training material, not only selected topics. Additionally, the physical conditions changed between MTOT and DTOT on the one hand, and RCT on the other hand. RTC was held in tiny rooms with inappropriate furniture. This made it difficult for RCT to follow the model of the upper levels.

# Chapter Nine
# Process Evaluation of Multigrade Teacher Training

The preceding chapter has presented an evaluation of the inputs of Multigrade Teaching Training. This chapter seeks to evaluate the process of the training. The first section presents the motivations and expectations of the trainees before the training. The second section describes where and when the training takes place and in what way the training is conducted during the ten days allocated to the course. The third section discusses to what extent the trainees appreciate the training. The fourth section explores follow-up activities after the training.

## 9.1 The motivation and the expectation of the trainees to participate in the training

### 9.1.1 Motivation of the trainees

Since all public primary school teachers were called in for training, and only Multigrade Teaching Training was offered to the teachers in the two RCs, they had in fact no other choice. We can see that the motivations for attending the training are slightly different between the different types of trainees. Table 9-1 shows the differences in motivation of the trainees. Monograde teachers have a more passive attitude than multigrade teachers and multigrade-experienced teachers. Multigrade teachers and multigrade-experienced teachers attend the training mostly because they want to improve their skills for multigrade teaching, while monograde teachers mostly think that they were forced to take it. More than 80% of multigrade teachers and multigrade-experienced teachers point out the necessity of improving their multigrade teaching methods. Monograde teachers on the other hand attended the training merely because they were told to attend the training by their headmasters/headmistresses or Resource Persons.

Table 9-1 Reasons why the trainees take the training

| reasons to attend the training | Kavre | | | | Nuwakot | | | |
|---|---|---|---|---|---|---|---|---|
| | multi | exp | mono | total | multi | exp | mono | total |
| I need to improve the methods of my multigrade teaching | 10 | 8 | 2 | 20 | 15 | 16 | 7 | 38 |
| I wanted to attend another training programme, but other programmes were not available | 2 | 0 | 3 | 5 | 0 | 1 | 3 | 4 |
| I was told to take this training by the RP or the headmaster | 7 | 6 | 6 | 19 | 10 | 11 | 13 | 34 |
| Training is useful in the case of absence of a teacher | 0 | 1 | 1 | 2 | 0 | 0 | 2 | 2 |
| Getting skills for effective education | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 2 |
| I wanted to know how to use multigrade teaching | 0 | 0 | 1 | 1 | 0 | 2 | 3 | 5 |
| total number of the trainees who filled in the questionnaire | 12 | 9 | 8 | 29 | 16 | 19 | 23 | 58 |

| | Kavre | | | Nuwakot | | |
|---|---|---|---|---|---|---|
| reasons | multi | experienced | mono | multi | experienced | mono |
| personal improvement | [1] 83% | [1] 89% | [3] 25% | [1] 94% | [1] 84% | [2] 30% |
| no alternative | [3] 17% | [3] 0% | [2] 38% | [3] 0% | [3] 5% | [3] 13% |
| told to attend | [2] 58% | [2] 75% | [1] 75% | [2] 63% | [2] 58% | [1] 57% |

Note: [ ] shows the ranking order among teachers of the same type.

### 9.1.2 Expectation of the trainees from the training

In order to understand the relation between the needs of the trainees and the training curriculum, the expectation of the trainees in relation to the training curriculum is investigated. Table 9-2 shows which of the following topics from among the contents of the training material the trainees expected to study during training.

Monograde teachers overall expected less from the programme than multigrade teachers and multigrade-experienced teachers. Multigrade teachers showed high expectations – more than 80% – for four topics directly related to multigrade teaching, including timetable planning and SLA, rather than for general topics[1] among teachers from Kavre district, and for two topics among teachers from Nuwakot district. Multigrade-experienced teachers showed high expectations – more than 80% – for two topics among teachers from Kavre district, and for

six topics among teachers from Nuwakot district. By contrast, monograde teachers show on the whole less expectation, and their interests concern more general pedagogical issues like student management and lesson plans.

Table 9-2 Topics from the training curriculum and expectation of the trainees

| topics from the training curriculum | Kavre | | | | Nuwakot | | | |
|---|---|---|---|---|---|---|---|---|
| | multi | exp | mono | total | multi | exp | mono | total |
| preparing a time table | 83% | 67% | 25% | 62% | 69% | 84% | 74% | 76% |
| student management skills | 75% | 78% | 38% | 62% | 81% | 89% | 83% | 84% |
| evaluation of students | 83% | 78% | 38% | 69% | 69% | 74% | 61% | 67% |
| daily attendance | 8% | 67% | 25% | 31% | 6% | 26% | 43% | 28% |
| lesson plans | 92% | 89% | 50% | 79% | 75% | 84% | 83% | 81% |
| use of the blackboard | 42% | 67% | 13% | 41% | 6% | 26% | 39% | 26% |
| use of the textbooks | 33% | 89% | 25% | 48% | 19% | 32% | 35% | 29% |
| Learning-by-doing methods | 75% | 78% | 25% | 62% | 63% | 89% | 70% | 74% |
| making songs and games | 67% | 67% | 25% | 55% | 69% | 79% | 78% | 76% |
| preparation of SLA | 75% | 78% | 25% | 62% | 81% | 89% | 74% | 81% |
| use of SLA | 83% | 78% | 25% | 66% | 75% | 84% | 61% | 72% |

## 9.2 Observation of the training

### 9.2.1 Training conditions in Nuwakot district

The RCT of Trishuli Resource Centre (RC) was held from 22 June to 1 July 2001. This is mid-summer and therefore very hot.[2] The training was held in the classrooms of Tribhuvan Trisuli high school where the RC building is located.

The official time schedule for the training runs from 10:30 to 16:00, but as Table 9-3 shows, the actual amount of time spent on training is shorter. Every day the training tended to start later and ended earlier. A short break in the morning and a lunch break were taken every day. The length of the break got longer, because it was too hot to go back to the classroom after the break. Taking all this into account, training hours per day were reduced from the official five hours to three or four hours.

[1] General topics such as 'the use of blackboard,' 'the use of textbooks' or 'daily attendance' get lower expectation scores.

[2] The district is sandwiched between Kathmandu valley and the Himalayan mountains so that the heat is captured there.

Table 9-3 Effective training hours in Nuwakot district

| days | starts | ends | breaks (minutes) | amount of time spent in training |
|---|---|---|---|---|
| 1 | 11:00 | 15:54 | 55 | 3H59 |
| 2 | 11:00 | 15:40 | 38 | 4H02 |
| 3 | 11:12 | 15:54 | 54 | 3H48 |
| 4 | 11:12 | 15:45 | 55 | 3H38 |
| 5 | 11:15 | 15:39 | 50 | 3H34 |
| 6 | 11:12 | 15:20 | 51 | 3H17 |
| 7 | 11:16 | 15:33 | 64 | 3H13 |
| 8 | 11:23 | 15:20 | 42 | 3H15 |
| 9 | 11:15 | 15:36 | 30 | 3H51 |
| 10 | 7:30 | 8:54 | 33 | 51 |

These three to four hours were not totally devoted to the training sessions. The first day had two hours of orientation for the training. On the second day 36 minutes were devoted to the filling in of questionnaires. The last day included 21 minutes of closing ceremony and 13 minutes for the completion of evaluation forms. Especially during the later days of training, there were frequent periods of 'ice breaking time'. The periods labelled 'ice breaking' were indeed more like leisure time. During this time the trainer and some volunteers from among the trainees proposed jokes and quizzes, sang songs or dictated poems. Table 9-4 shows that the time devoted to the training sessions for multigrade teaching was in fact even less than the time shown in Table 9-3.

Table 9-4 Time spent for training sessions in Nuwakot district

| days | training hours | "ice breaking" | other | training sessions |
|---|---|---|---|---|
| 1 | 3H59 | | 120 min | 1H59 |
| 2 | 4H02 | 8 min | 36 min | 3H19 |
| 3 | 3H48 | | | 3H48 |
| 4 | 3H38 | 12 min | | 3H26 |
| 5 | 3H34 | 24 min | | 3H10 |
| 6 | 3H17 | 36 | | 2H41 |
| 7 | 3H13 | 6 | | 3H07 |
| 8 | 3H15 | 5 | | 3H10 |
| 9 | 3H51 | 9 | | 3H42 |
| 10 | 51 | | 34 | 17 |

### 9.2.2 Training conditions in Kavre district

The RCT of Sunthan RC was held from 7 to 16 July 2001. The official time schedule for the training is again ten days, but the training took actually only eight days, because there was a general strike on the sixth day and the last day was a local holiday. The training was held in a classroom of the RC at Sarada secondary school. Since Kavre district has introduced the RC system only lately, the RCs do not have their own building. Only one group of Multigrade Teaching trainees received training at Sunthan RC.

Table 9-5 Effective training hours in Kavre district

| days | starts | ends | breaks (minutes) | amount of time spent in training |
|---|---|---|---|---|
| 1 | 10:57 | 3:10 | 54 | 3H19 |
| 2 | 10:37 | 3:58 | 79 | 4H02 |
| 3 | 6:30 | 8:56 | 10 | 2H16 |
| 4 | N/A | N/A | | N/A |
| 5 | N/A | N/A | | N/A |
| 6 | no training | | | 0 |
| 7 | 6:30 | 9:10 | 10 | 2H30 |
| 8 | 6:30 | 8:40 | 0 | 2H10 |
| 9 | 6:30 | 9:43 | 0 | 3H13 |
| 10 | no training | | | 0 |

The training followed a time schedule running from 10:30 to 16:00. After two days, the trainer and the trainees decided to change training hours to 6:30 to 9:00 in the morning, because it was too hot. A lunch break was taken on the first two days. A light meal was provided in the school on the second day. From the third day onwards, the training was held in the morning, thus there was no break. Even though the training did not have any breaks, training hours from the third day onwards were very short, two and a half hours.

Table 9-5 shows that the actual amount of the time spent in training in Kavre district is shorter than the official time. The training tends to start later and later and ends more and more early. Short breaks were occasionally taken in the morning and a lunch break was taken on the first two days. In conclusion, training hours per day shrunk from the official five hours to two to four hours.

Those two to four hours were not totally devoted to the training sessions. The first day had 25 minutes of orientation for the training. On the second day 53 minutes were devoted to the

filling in of questionnaires. The last day included 15 minutes of closing ceremony and 28 minutes for the completion of the evaluation forms. Again 'ice breaking time' was frequent also in Kavre district. Table 9-6 shows the time actually devoted to the training sessions on multigrade teaching, which is even less than the time shown in Table 9-5.

Table 9-6 Time spent for training sessions in Kavre district

| days | training hours | "ice breaking" | other | Training sessions |
|---|---|---|---|---|
| 1 | 3H19 | | 25 min | 2H54 |
| 2 | 4H02 | 2 min | 53 min | 3H07 |
| 3 | 2H16 | 20 min | | 1H56 |
| 4 | N/A | | | N/A |
| 5 | N/A | | | N/A |
| 6 | no training | | | 0 |
| 7 | 2H30 | 17 min | | 2H13 |
| 8 | 2H10 | 28 min | | 1H42 |
| 9 | 3H13 | 18 min | 43 min | 2H12 |
| 10 | no training | | | 0 |

### 9.2.3 Physical conditions for group work

In both districts, the classrooms were very small and there were windows only on one side of the room so that the classrooms were dark and not well ventilated. Each classroom has to accommodate more than twenty-five adults. It was equipped with long, heavy wooden desks attached to long wooden benches placed in rows facing the blackboard. Since the furniture is meant for children the trainees were seated tightly.

The trainer in Nuwakot district divided his trainees into five groups and the trainer in Kavre district divided them into four groups – as taught in Training of Trainers (TOT). However, since there were no large rooms with large tables as for TOT, the small classrooms with their heavy inflexible furniture made group work difficult. There was barely any space in the classrooms to move the furniture. Although the trainers divided the trainees into groups, the groups were not spatially well defined. The trainees were seated together facing the blackboard, with the boundaries of groups being ambiguous and some trainees not belonging to any group.

The difficulties with group work were however not only caused by the physical conditions. The trainers did not know how to direct group work. One day, the trainer in Nuwakot district came to the classroom early in the morning and moved desks and benches to face each other, create conditions similar condition to those of TOT. However, he did not give any instructions on how to conduct discussions or work as a group, and the trainees did not seem to know what they should do. Except for the seating arrangement and the copying of training material between trainees there was no effective group work. On the next day, the arrangement of the furniture returned to rows.

### 9.2.4 Implementations

In Nuwakot district, the trainer read out the text – if any – from the training material. Then he assigned work on exercises from the training material to each group. He gave about 20 minutes to work on the assigned work. After 20 minutes, each group made a presentation and the other trainees took notes. Then followed comments from the trainer. This style of work continued throughout the training. There were 13 rounds of this.

Some of the activities in the training material are indeed suitable for group work, but others are not. However, the trainer took no note of the type of activity, but assigned the activities from the training material in their order of appearance there. Although the activities were assigned to groups of trainees, collaboration in the group and discussion were rare. Trainees sat in their group, in rows, facing the blackboard. One or two active trainees within the group wrote their answers on the training material and others simply copied them. These active trainees presented their answers to the whole class, and the trainees of other groups likewise dictated their answers. Only a few trainees really worked on the activities. Even active trainees worked on only one fifth of the exercise activities of the training material, i.e. those assigned to their group. In the case of passive trainees, they simply copied answers and filled them in on their own training material. Thus at the end of the training, all trainees had all exercises from the training material completed.

In Kavre district, the trainer or one of the trainees read the text from the training material. Unlike in Nuwakot district, the trainer in Kavre district differentiated between the various types of activities given in the training material. If the activity was just an explanation, he

read the text. If the activity was an exercise, he assigned the trainees to work on the exercise. Although he divided the trainees into four groups, the trainees worked on the activities individually. Some trainees consulted with their neighbours in the same row. The first who finished work presented the answers to the class. Slower trainees thus had their answers dictated. Sometimes a discussion in class was held concerning the answers, and at other times the trainer concluded the section. These activities continued up to the last page of the training material.

### 9.2.5 Instruction by the trainers

Although the style of training was slightly different in the two districts, both trainers followed the training material from the first to the last page and finished all activities. Because the text from the training material was simply read out, sufficient explanation was often lacking. They tended to run through the material very quickly, sometimes totally omitting parts such as timetables, lesson plans and Self Learning Activity (SLA). A partial explanation for this is the fact that in the training material particular activities with clear directions were not provided for topics such as SLA and lesson plans.

In Nuwakot, the trainer assigned making a timetable as homework for four groups on the second day. However, he did not provide any explanations and instructions on how to make timetables, or ask trainees to pay particular attention to certain aspects. When he assigned the preparation of SLA as an exercise, he just told the trainees to make up ten questions. As a result, the trainees simply produced ten problems of mathematics – calculations – or ten questions on vocabulary.

In Kavre district, the trainer read the explanations on timetables from the training material. He told the trainees to make timetables, but he did not explain how to make them. Since the instructions were not clear, the trainees had difficulties with making timetables. When each group presented its timetable, the trainer commented on them, but his comments were rather instructions to try again, because most of the trainees had not managed to make a timetable.

On the sixth day, dealing with SLA, the exercises of practice teaching were not set up under conditions of multigrade teaching. The trainees taught using teaching material prepared for

monograde settings. Because the chapter on SLA in the training material does not really focus on self-learning, but rather on general teaching materials, also training focuses on making and using general teaching materials including templates, calendars, matchstick figures, songs and games. The training intends to teach the use of SLA, but the training material does not say anything about an appropriate amount of SLA or contents suitable for self-learning. It rather focuses on pedagogical points which trainees should remember when making teaching materials – including teaching material for SLA. The attention of trainees was focussed on making beautiful teaching material and presenting it in monograde class situation.

One trainee objected to the use of a monitor in multigrade teaching. He said a monitor could not control other students, and the other students would beat or ignore the monitor. There followed a discussion about monitors, but the trainer simply continued with the training material after the discussion had cooled down.

### 9.2.6 Practice teaching

In both districts, when trainees did something that did not correspond with the teaching model, the trainers did not correct them. For example, when a trainee did not distinguish between the main teaching class and the additional class, or when another trainee assigned SLA to both his main teaching class and his additional class, the trainers did not correct them. Comments and feedback were limited to only general teaching methods.

### 9.2.7 Observation forms

In both districts observation forms were not used in practice teaching. During the interview the trainer in Nuwakot district explained that he did not use the form because the Primary Teacher Training Unit (PTTU) had not provided copies of the form to distribute to the trainees – and the PTTU should have provided copies. In fact the training material and the handbook do not provide any instructions for the trainers to make photocopies of the forms. On the other hand, the training programme distributes the training material, pens, pencils and notebooks to the trainees, and also grants a training allowance. However, notebooks were

never used by the trainees, because the trainees filled in answers directly on the training material. Thus resources could be transferred to making photocopies.

### 9.2.8 Attitude of the trainees

According to the interview with the trainer in Nuwakot district, it was in fact difficult to conduct the training, because the trainees tended to complain and discuss various other matters during the training sessions. As a first point of discontent, they were not happy to have to devote time during their summer vacation to training. Second, they thought that the training allowance of 75 Rupees per day was insufficient. Third, they claimed that the training was far removed from the real school situation and hence not worth taking. The trainer had difficulties with the training, because they often raised such issues and interrupted the training sessions. He often had to immediately set a second round of activities, following a just completed round, otherwise the trainees would try to interrupt him and try to end the training session.

In fact the trainees tried to shorten, avoid, and skip training as much as possible. In Nuwakot district, whenever the trainer gave instructions, the trainees tended to object. When making a timetable was assigned as homework, nobody did the task at home. By 15:30 on each day the trainees did no longer concentrate on the training; some worried about the schedule of their local bus, others chatted with their colleagues. Some were just waiting for the end of the session. Some trainees suggested to have a one-day holiday. When the trainer wanted the trainees to do practice teaching, the trainees said that they were not yet mentally ready. Then he tried to decide during which of the following three days the trainees would do their practice teaching, but also this was not easy. Some trainees said that they could not attend training the following days and the trainer had to insist on their attendance.

In Kavre district, on the second day, some trainees requested to finish the training a couple of days earlier because it was too hot. The trainer denied the proposal but changed the time of the training from 6:00 to 9:30 to avoid heat from the following day.

## 9.3 Self-evaluation of the training programme by the trainees

### 9.3.1 Detailed evaluation of the training

Table 9-7 Trainee comments on the future of training in Kavre district

| Kavre district | trainee comments | multigrade | multigrade-experience | monograde | total |
|---|---|---|---|---|---|
| duration | too short | 2 | 4 | 1 | 7 |
| timing | at the beginning of the year | 2 | 0 | 1 | 3 |
| | during school holidays | 1 | 0 | 0 | 1 |
| | frequent training | 2 | 3 | 3 | 8 |
| | refreshment training | 1 | 0 | 0 | 1 |
| | during school time | 2 | 0 | 2 | 4 |
| place | in school | 2 | 1 | 0 | 3 |
| trainees | all teachers should be included | 6 | 0 | 2 | 8 |
| | priority for multigrade teachers | 0 | 0 | 1 | 1 |
| contents | ideas on various subjects | 1 | 0 | 0 | 1 |
| | painting and handicraft | 0 | 1 | 0 | 1 |
| training requirements | handouts, material | 1 | 2 | 1 | 4 |
| | certificate | 0 | 0 | 1 | 1 |
| | no answer | 3 | 3 | 2 | 8 |
| | total number of the trainees who filled in the evaluation form | 13 | 9 | 9 | 31 |

According to the evaluation forms which the trainees filled in on the last day of training, the majority of the trainees selected 'good' or 'fair' on the evaluation scales. When they were asked for comments and suggestions on the future of the training, many trainees made critical comments. In Kavre district, although the trainees seemed to appreciate the opportunity to receive training for the first time, seven trainees thought that the training was too short, and eight trainees thought training should take place more frequently. A number of trainees commented on the timing of the training. Some comments suggested that the training should be conducted at the beginning of the academic year and during the holidays.[3]

Four trainees thought the training should be conducted during school time. Three trainees thought that it should be held in schools, because it should reflect the actual situation of a classroom with students. Eight trainees thought that it should be provided to all teachers, including volunteer teachers from the community. Some of them complained indeed about eleven teachers who had not attended the training at all, and demanded that training should

be made effectively compulsory. Two trainees wanted to learn more on subject-related topics. Four trainees said teaching material was required and one trainee asked for a training certificate.[4] One teacher (Kavre-11) commented on the need for material to prepare teaching aids.

Table 9-8 Trainee comments on the future of training in Nuwakot district

| Nuwakot district | Trainee comments | multigrade | multigrade-experience | monograde | total |
|---|---|---|---|---|---|
| duration | too long | 1 | 0 | 1 | 2 |
| | too short | 10 | 9 | 8 | 27 |
| timing | frequent training | 2 | 3 | 3 | 8 |
| | refreshment training | 0 | 2 | 0 | 2 |
| | in winter | 1 | 2 | 0 | 3 |
| place | in school | 2 | 2 | 4 | 8 |
| trainees | headmasters should be included | 2 | 0 | 0 | 2 |
| | private teachers should be included | 0 | 0 | 4 | 4 |
| contents | more time for micro teaching | 0 | 1 | 0 | 1 |
| | basic educational methods | 0 | 0 | 1 | 1 |
| | improvement of the contents | 2 | 0 | 0 | 2 |
| | ideas on various subjects | 2 | 1 | 1 | 4 |
| | singing and dancing | 0 | 1 | 0 | 1 |
| | painting and handicraft | 0 | 2 | 0 | 2 |
| training requirement | certificate | 2 | 0 | 1 | 3 |
| | sufficient training allowance | 6 | 0 | 2 | 8 |
| | answers to questions from the trainees | 0 | 0 | 1 | 1 |
| | stricter adherence to time schedule | 0 | 0 | 2 | 2 |
| | supervision and advice | 1 | 4 | 2 | 7 |
| external requirement | teaching materials | 8 | 7 | 3 | 18 |
| | physical facilities | 8 | 1 | 1 | 10 |
| | sufficient teacher allocation | 5 | 0 | 2 | 7 |
| | special allowance for multigrade teachers | 3 | 1 | 0 | 4 |
| overall | adequate for now | 0 | 0 | 2 | 2 |
| | negative comments | 2 | 3 | 4 | 9 |
| | trainees felt encouraged and enjoyed training | 0 | 1 | 3 | 4 |
| | no answer | 2 | 1 | 2 | 5 |
| | total number of the trainees who filled in the evaluation form | 18 | 20 | 29 | 67 |

[3] At the moment training is conducted at the beginning of the year and during the summer vacation.
[4] It is not made explicit what kind of material they mean.

The points raised by the trainees in Nuwakot district were similar to those from Kavre district. but overall trainees were even more critical. In Nuwakot district, 27 trainees thought that the training was too short and eight trainees said more frequent training was required. Some trainees thought training duration should be one month. Three trainees thought that the training should be held in winter.

Eight trainees thought the training should be conducted in schools, because they believe that the training should be held in real classroom situations with students. One trainee thought more time could be spent with practice teaching. These last comments indicate that the trainees appreciate the practical training.

Six trainees thought that training should be provided to all teachers, including headmasters and private school teachers. Seven trainees wanted to learn more on subject-related topics. One monograde teacher-trainee wanted to learn more about fundamental educational methods. Three trainees said they require a training certificate. Seven trainees thought supervision and advice from supervisors was necessary.

Some comments concerning the implementation of the training were critical. Two trainees complained that the time schedule of the training was not strictly adhered to. One trainee did not get an answer to one of her questions during the training. Eight trainees thought the training allowance was insufficient. Two multigrade teacher-trainees thought reform of the training content was necessary.

### 9.3.2 Trainee perception of multigrade teaching after the training

Many factors external to the training course were again raised. These factors are not directly related to Multigrade Teaching Training, but rather to multigrade teaching. Ten trainees said the improvement of the physical facilities in schools was necessary, and eighteen trainees said teaching material was required.[5] Four trainees said special allowances for multigrade teachers were necessary, and seven trainees asked for a sufficient allocation of teachers to schools.

Four trainees who currently work in monograde schools enjoyed the training and commented on the training positively:

> "I liked all the aspects of the training. Although some of the training contents were already known, they provided additional benefits." (Nuwakot-B5, multigrade experience).
>
> "The training was enjoyable. I wish to take such training in the near future." (Nuwakot-B6, monograde).
>
> "The training encouraged us. Multigrade teaching is difficult, but the training taught us how to solve this more easily." (Nuwakot-B10, monograde).
>
> "The training has made us qualified and useful teachers." (Nuwakot-K20, monograde).

By contrast, nine trainees expressed a negative perception of multigrade teaching, and consequently did not appreciate the training.

> "Multigrade teaching itself is not very effective so that such training is not very helpful. There should be enough teachers allocated to each school instead of this." (Nuwakot-K1, multigrade).
>
> "Grade teaching is better than multigrade teaching. A sufficient number of teachers must be provided." (Nuwakot-K2, multigrade, Nuwakot-K7, multigrade experience, Nuwakot-K25, monograde, Nuwakot-K26, monograde).
>
> "This training is not useful and not necessary for schools with a sufficient number of teachers. When the class is conducted by a monitor, what achievement can the students expect?" (Nuwakot-K3, multigrade experience).
>
> "(Even if we are provided with training), multigrade teaching does not help quality education." (Nuwakot-K21, multigrade experience).
>
> "It is better to provide a sufficient number of teachers than this training." (Nuwakot-K13, monograde).
>
> "It is very difficult for teachers to educate students through multigrade teaching, so that (even after the training) education won't be of good quality." (Nuwakot-K18, monograde).

[5] However it is not clear what kind of material they mean.

These comments indicate that the training barely influenced the negative perception of the trainees. Moreover, none of multigrade teachers gave positive comments. The training hardly encourages them.

## 9.4 Follow-up support by the trainers

Teacher training can make a difference for the quality of education only with adequate types of training and *on-going support* (Craig et al., 1998). However in this case support after the training is not systematically organised. Although the training handbook for the trainer instructs him to make a supervision plan for the trainees, none of the trainers did this during the training. In Nuwakot district, the Resource Person of the Trisuli RC was not involved in the training at all. He did not take any role, although he had conducted Multigrade Teaching Training previously. He did not come to see the RCT. In Kavre district, the Resource Person of Sunthan RC also did not get involved in the training. He has never conducted any training and did not attend DTOT. He did not come to see the RCT. As none of the trainers are responsible for the RCs where RCT was conducted, follow-up for the training can hardly be integrated into the regular supervision by the Resource Persons.

*Nuwakot district*

According to interviews with two of the RCT trainers eight months after the training, one trainer had visited two schools.[6] The other trainer had not done any follow-up visits for Trisuli RC. Since both are Resource Persons for other RCs, visiting and supervising the schools of their own RC is their primary duty, visiting the schools of Trisuli RC is voluntary.

*Kavre district*

According to the interview with the RCT trainer eight months after the training, he had visited all 12 schools of the RC, including his own school, but he had not observed classrooms. When he visited schools, he suggested to teachers to provide SLA while teaching alternate classes under multigrade conditions.

## 9.5 Conclusion

[6] The reason why one of the trainers had visited two schools of Trisuli RC is that the headmasters of these schools asked him to visit their school to provide advice.

This chapter has examined the process of Multigrade Teaching Training. Even though training follows a diffusion model, Multigrade Teaching Training fails to diffuse the training messages effectively. At RCT level, 'diffusion of something' becomes a goal in itself and the training has little meaning – apart from touching a great number of trainees.

The aim of the trainers was to cover the whole training material. Both trainers managed to go through the training material from the first to the last page. The duration of the training sessions was shorter than the official five hours per day in both districts. The shortened time made this difficult. In Kavre district, where training was reduced to eight days, it was particularly difficult to cover all topics in the training material. The trainers tended to quickly run through the material and sometimes omitted topics. Sufficient explanations were often lacking, because the trainers limited themselves to reading the text from the training material. Although the trainees were divided into groups, group work and discussion rarely took place. When trainees did things wrong during their practice teaching, the trainers did not correct them. The observation forms were not used for practice teaching and support after training was not systematically organised.

The trainers had difficulties with conducting the training smoothly. The classrooms were very small, dark and hot. They were equipped with heavy wooden desks and long wooden benches facing the blackboard. There was barely any space to move furniture in the classrooms. The trainees often interrupted the training. The trainees tried to shorten, avoid, and skip the training as much as possible. In Nuwakot district, whenever the trainer gave instructions, the trainees tended to object.

After all, the training barely influenced the negative perception of multigrade teaching of the trainees. They thought that multigrade teaching itself was problematic and that nothing would be changed by the training course, unless teaching material, an improvement of school facilities and a sufficient number of teachers were provided. A lot of critical comments were made by the trainees. This included the duration, timing, frequency and location of the training. Teaching material, certificates and a higher allowance were required. Monograde teacher-trainees wanted to learn more about fundamental educational methods and do more on subject-related topics, rather than study multigrade teaching.

# Chapter Ten
# Output Evaluation of Multigrade Teacher Training

The preceding two chapters have presented an evaluation of Multigrade Teaching Training in terms of training input and training process. This chapter continues the evaluation of the training with reference to its output. The first section determines the base knowledge of the trainees prior to training. The second section identifies knowledge acquired by the trainees during the training. The third section discusses the practice of the trainees in their classrooms. The fourth section supplements the trainers' evaluation of the training.

## 10.1Trainee knowledge concerning multigrade teaching before the training

In order to understand their knowledge of multigrade teaching before the training, trainees have been asked in the questionnaire at the beginning of the training, how they currently teach multigrade classes.[1] The answers showed up several issues. Some trainees mentioned classroom settings, others class organisation or specific techniques for multigrade teaching. The rest of the trainees expressed apathy for multigrade teaching.

### 10.1.1 Nuwakot district

Table 10-1 summarises how the trainees in Nuwakot district currently manage multigrade teaching and what techniques for multigrade teaching they were aware of before the training. Three kinds of *class organisation* of multigrade classes identified from the questionnaires were categorised into the patterns identified in Chapter Six. Six trainees described pattern three, i.e. one class is the main teaching class and the other is considered an additional class. Three trainees described pattern four, i.e. the teacher gives different exercises to the students of different grades and visits all classes, checking their answers. One monograde teacher-trainee mentioned pattern one, i.e. the teacher goes to one class for the first lesson period, then teaches a second class for the second period (with all lessons being shortened). None mentioned pattern two, i.e. one lesson period is divided into two equal parts. This is probably because most schools have a sufficient number of classrooms for all grades and students of different grades are seated in separate classrooms (6.5.2).

[1] This question was asked in an open-ended form to avoid inducing certain types of answers.

In relation to *techniques* for multigrade teaching, some trainees, including monograde teacher-trainees, are already aware of specific techniques for multigrade teaching, such as appointment of a monitor and Self-Learning Activity (SLA). Although only eight trainees had followed Multigrade Teaching training before (cf. Table 7-7), nine trainees mentioned the monitor and six trainees mentioned SLA.

While some trainees provided specific descriptions, a few trainees also showed *apathy* or a non-motivated attitude. Twenty-four out of 58 trainees provided abstract statements such as 'I will teach according to what I will learn in the training.' Eleven monograde teacher-trainees said that they do not need to learn about multigrade teaching.

Table 10-1 Trainee knowledge concerning multigrade teaching in Nuwakot district

| | Current multigrade teaching | Nuwakot district | | | |
|---|---|---|---|---|---|
| | | multigrade | multigrade-experience | monograde | total |
| class organisation | pattern one | 0 | 0 | 1 | 1 |
| | pattern two | 0 | 0 | 0 | 0 |
| | pattern three | 3 | 1 | 2 | 6 |
| | pattern four | 0 | 2 | 1 | 3 |
| techniques | Monitor | 4 | 3 | 2 | 9 |
| | self-learning activity (SLA) | 3 | 2 | 1 | 6 |
| | group work, monitor | 0 | 0 | 0 | 0 |
| | group work | 0 | 0 | 0 | 0 |
| | time table | 0 | 0 | 0 | 0 |
| | supervision and evaluation | 0 | 0 | 0 | 0 |
| | making lesson plans | 0 | 0 | 0 | 0 |
| apathy | will teach according to what will be taught in the training | 9 | 10 | 5 | 24 |
| | I do not teach multigrade classes | 0 | 2 | 9 | 11 |
| | total number of the trainees who filled in the questionnaire | 16 | 19 | 23 | 58 |

Note: Multigrade: teachers who teach in multigrade schools multigrade-experience: teachers who have experience of multigrade teaching, monograde: teachers who teach in monograde schools.

### 10.1.2 Kavre district

Table 10-2 summarises how the trainees in Kavre district currently manage multigrade teaching and what techniques for multigrade teaching they were aware of before the training. Three types of *class organisation* for multigrade classes were mentioned. Nine trainees described pattern three. Two trainees described pattern two. One trainee mentioned pattern

four. None mentioned pattern one, because only a few schools do not have a sufficient number of classrooms for all grades so that students of two or more grades are seated in the same classroom (6.5.2).

Table 10-2 Trainee knowledge concerning multigrade teaching in Kavre district

| | Current multigrade teaching | Kavre district | | | |
|---|---|---|---|---|---|
| | | multigrade | multigrade-experience | monograde | total |
| class organisation | pattern one | 0 | 0 | 0 | 0 |
| | pattern two | 0 | 1 | 1 | 2 |
| | pattern three | 6 | 1 | 2 | 9 |
| | pattern four | 1 | 0 | 0 | 1 |
| techniques | Monitor | 2 | 1 | 1 | 4 |
| | SLA | 2 | 1 | 1 | 4 |
| | group work and monitor | 1 | 3 | 0 | 4 |
| | group work | 1 | 1 | 0 | 2 |
| | Timetable | 1 | 1 | 0 | 2 |
| | supervision and evaluation | 0 | 1 | 0 | 1 |
| | making lesson plans | 0 | 1 | 0 | 1 |
| apathy | will teach according to what will be taught in the training | 1 | 0 | 0 | 1 |
| | I do not teach multigrade classes | 0 | 0 | 2 | 2 |
| | total number of trainees who filled in the questionnaire | 12 | 9 | 8 | 29 |

In relation to *techniques* for multigrade teaching, some trainees, including monograde teacher-trainees, are already aware of specific techniques for multigrade teaching. The techniques mentioned are SLA, the appointment of a monitor, group work and specific timetables. Additionally, evaluation and lesson plans were mentioned. Four trainees mentioned the monitor, four trainees mentioned SLA and two trainees mentioned group work. Four trainees combined use of a monitor and group work and two trainees mentioned timetables. Although the trainees of Kavre district had never received Multigrade Teaching Training, they were aware of as many techniques as teachers in Nuwakot district.

Some trainees were not interested in the training, but their number was smaller than in Nuwakot district. Two monograde teacher-trainees were not interested, because multigrade teaching is not needed. One multigrade teacher-trainee did not answer the question.

## 10.2 Knowledge on multigrade teaching acquired by the trainees during the training

### 10.2.1 The most 'impressive' components of the training

In order to understand what the trainees remember most clearly from the training programme, they were asked at the end of the training what its most 'impressive' components had been. Their answers show up three issues. A number of them pointed to multigrade teaching-related issues, including SLA, timetables, monitors and seating plans. Other trainees were mainly interested in general pedagogical issues.

In Nuwakot district, 37 trainees mentioned multigrade teaching-related issues (Table 10-3). Twenty-four trainees in particular remember SLA. Nineteen trainees, especially monograde teacher-trainees, were more interested in general pedagogical issues. Four trainees appreciated the opportunity to receive training, because they could discuss with other teachers.

Table 10-3 Most impressive components of the training in Nuwakot district

| Nuwakot district | most impressive components of the training | multigrade | multigrade-experience | monograde | total |
|---|---|---|---|---|---|
| multigrade teaching (37 trainees) | SLA | 10 | 7 | 7 | 24 |
| | Timetable | 4 | 1 | 2 | 7 |
| | Monitors | 1 | 1 | 2 | 4 |
| | seating plan | 1 | 0 | 1 | 2 |
| general pedagogy (19 trainees) | class control skills | 1 | 5 | 5 | 11 |
| | use of teaching material | 0 | 1 | 1 | 2 |
| | entertainment ("ice breaking"), games, drawing | 0 | 0 | 5 | 5 |
| | Planning | 0 | 0 | 1 | 1 |
| opportunities afforded by the training (4 trainees) | discussion with other teachers | 0 | 2 | 1 | 3 |
| | role playing | 0 | 0 | 1 | 1 |
| | total number of trainees who filled in the evaluation form | 18 | 20 | 29 | 67 |

In Kavre district, 24 trainees mentioned multigrade teaching-related issues (Table 10-4). Five trainees were interested in general pedagogical issues. One trainee expressed an appreciation of the opportunity to receive helpful training.

Table 10-4 Most impressive components of the training in Kavre district

| Kavre district | most impressive components of the training | multigrade | multigrade-experience | monograde | total |
|---|---|---|---|---|---|
| multigrade teaching (24 trainees) | time table | 1 | 2 | 2 | 5 |
| | monitors | 4 | 0 | 0 | 4 |
| | SLA | 2 | 1 | 1 | 4 |
| | realisation of the possibility of teaching 2 grades | 1 | 2 | 1 | 4 |
| | class control skills during teacher absence | 2 | 1 | 0 | 3 |
| | new ways of teaching | 0 | 0 | 2 | 2 |
| | teaching easier and more simple | 0 | 2 | 0 | 2 |
| general pedagogy (5 trainees) | use of teaching material | 0 | 1 | 0 | 1 |
| | games | 1 | 0 | 0 | 1 |
| | planning | 0 | 0 | 1 | 1 |
| | evaluation | 1 | 0 | 1 | 2 |
| opportunities afforded by the training (1 trainees) | help | 0 | 1 | 0 | 1 |
| | total number of trainees who filled in the evaluation form | 13 | 9 | 9 | 31 |

Although the training curriculum also includes issues which are not directly related to multigrade teaching, the trainees in both districts were indeed impressed or remembered multigrade teaching-related issues from among the training components.

### 10.2.2 Comprehension of multigrade teaching before and after the training

In order to identify different levels of understanding before and after the training, two indicators are used. First, the components related to multigrade teaching in Tables 10-3 and 10-4 ('most impressive components') are compared to those in Tables 10-1 and 10-2 ('trainee knowledge before the training'). This comparison is shown in Tables 10-5 and 10-6. The comparison is supposed to show the acquisition of knowledge by the trainees in relation to multigrade teaching. The number of trainees mentioning SLA, monitors, timetables and seating plans increased after the training. This indicates that the trainees acquired new knowledge during the training or recalled things learned previously.[2]

[2] There is a clear difference between before and after the training in Nuwakot district, but there is no significant difference in Kavre district.

Table 10-5 Knowledge concerning multigrade teaching before and after the training in Nuwakot district (1)

| Nuwakot | multigrade | | multigrade-experience | | monograde | |
|---|---|---|---|---|---|---|
| District | before | after | before | after | before | after |
| SLA | 3 | 10 | 2 | 7 | 1 | 7 |
| Monitor | 4 | 1 | 3 | 1 | 2 | 2 |
| timetable | 0 | 4 | 0 | 1 | 0 | 2 |
| seating plan | 0 | 1 | 0 | 0 | 0 | 1 |

Table 10-6 Knowledge concerning multigrade teaching before and after the training in Kavre district (1)

| Kavre | multigrade | | multigrade-experience | | monograde | |
|---|---|---|---|---|---|---|
| district | before | after | before | after | before | after |
| SLA | 2 | 2 | 1 | 1 | 1 | 1 |
| monitor | 2 | 4 | 1 | 0 | 1 | 0 |
| timetable | 1 | 1 | 1 | 2 | 0 | 2 |
| group work | 1 | 0 | 1 | 0 | 0 | 0 |

In a second analysis, the trainees were asked before the training how they conduct multigrade teaching. After the training they were asked again how they would conduct multigrade teaching from then on. Tables 10-7 and 10-8 confirm that there is a difference in the answers between the two surveys. Most significantly, all types of trainees cited SLA and monitors more often after the training.

Table 10-7 Knowledge concerning multigrade teaching before and after the training in Nuwakot district (2)

| Nuwakot | multigrade | | multigrade-experience | | monograde | |
|---|---|---|---|---|---|---|
| | before | after | before | after | before | after |
| pattern one | 0 | 0 | 0 | 0 | 1 | 0 |
| pattern three | 3 | 2 | 1 | 4 | 2 | 14 |
| use of blackboard | 0 | 3 | 0 | 0 | 0 | 0 |
| seating plan | 0 | 3 | 1 | 1 | 0 | 0 |
| SLA | 4 | 6 | 3 | 8 | 1 | 17 |
| monitor | 4 | 12 | 3 | 12 | 2 | 17 |
| timetable | 0 | 0 | 0 | 2 | 0 | 0 |
| group work | 0 | 0 | 0 | 2 | 1 | 0 |
| lesson plan | 0 | 0 | 0 | 1 | 0 | 0 |
| other | 1 | 0 | 0 | 1 | 2 | 0 |
| number of trainees who answered the relevant questions | 11 | 13 | 15 | 17 | 15 | 25 |

In Nuwakot district, the number of 4 multigrade teacher-trainees who mentioned SLA and monitors before the training went up to 6 for SLA and to 12 for monitors. Concerning multigrade experienced teacher-trainees the numbers went up from 3 before the training to 8 (SLA) and 12 (monitors). Before the training SLA and monitors were cited by respectively 1 and 2 monograde teacher-trainees, this went up to 17 after the training.

In Kavre district, the difference is not as clear as in Nuwakot district, but differences between before and after the training can be observed in Table 10-8. Especially the number of the trainees who mentioned monitors increased. For multigrade teacher-trainees it passed from 3 to 12, for multigrade experienced teacher-trainees from 4 to 6, and for monograde teacher-trainees from 1 to 5.

Table 10-8 Knowledge concerning multigrade teaching before and after the training in Kavre district (2)

| Kavre | multigrade | | multigrade-experience | | monograde | |
|---|---|---|---|---|---|---|
| | before | after | before | after | before | after |
| pattern two | 2 | 0 | 1 | 0 | 2 | 0 |
| pattern three | 4 | 1 | 3 | 1 | 2 | 0 |
| patter four | 1 | 1 | 0 | 1 | 0 | 0 |
| SLA | 10 | 3 | 7 | 0 | 2 | 3 |
| monitor | 3 | 12 | 4 | 6 | 1 | 5 |
| timetable | 1 | 1 | 1 | 2 | 0 | 0 |
| seating arrangement | 1 | 1 | 0 | 0 | 0 | 0 |
| group work | 0 | 2 | 4 | 2 | 0 | 0 |
| use of blackboard | 0 | 1 | 0 | 0 | 0 | 0 |
| lesson plan | 0 | 0 | 1 | 0 | 0 | 0 |
| other | 0 | 2 | 1 | 1 | 0 | 0 |
| number of trainees who answered the relevant questions | 12 | 13 | 9 | 9 | 8 | 9 |

What is taught in the training is not entirely new for some trainees hence we cannot be sure that knowledge shown after the training was really acquired through the training. However, the training in any case stimulated the trainees.

> "I was using the methods (learnt in the training) before the training, but I did not know fully how to manage them well. This training gave me self-confidence to manage my classes effectively." (Kavre-23, multigrade).

> "I will adopt the techniques learnt in the training, as well as use my previous experience and knowledge." (Nuwakot-B28, multigrade).

Some trainees did acquire new knowledge through the training, but did not agree with what they have learnt in the training.

> "(Multigrade classes should be) supervised by a monitor in one class and taught by the teacher in another class, but I do not think this technique is useful." (Nuwakot-K3, multigrade experienced).

> "(I will) prepare SLA and arrange for a monitor, but if the monitor is given the answer keys, he/she copies the answers and does not learn well. Consequently he will fail the examinations. Therefore, alternative method should be taken." (Nuwakot-B3, multigrade).

Looking at the opinions expressed by the trainees, their acceptance and adoption of the methods taught is not certain. Still, the results from the evaluation forms indicate that some knowledge on multigrade teaching is certainly acquired or recalled by a number of trainees.

### 10.2.3 Knowledge of multigrade teacher-trainees before and after the training

Although the question 'how will you conduct multigrade teaching?' was submitted to all trainees, only multigrade teacher-trainees will have to face multigrade teaching after the training. Thus this sub-section specifically focuses on their answers (Tables 10-9 and 10-10).

More multigrade teacher-trainees in Nuwakot district answered the question on teaching techniques after the training than before (Table 10-9). There were a certain number of trainees who had known techniques for multigrade teaching before the training, but a greater number of trainees gained new knowledge or became more confident with their answers. Only six multigrade teacher-trainees, out of 16 who filled in the questionnaire, gave an answer to the question before the training, but this went up to 13 trainees out of 18 after the training. The trainees answering the question mentioned monitors or SLA to help conducting multigrade classes. Some also mentioned division of the blackboard and seating arrangements.

Table 10-9 Knowledge concerning multigrade teaching of multigrade teacher-trainees in Nuwakot district

| multigrade teachers | | |
|---|---|---|
| trainees | before | after |
| B-2 | | monitor |
| B-3 | monitor, SLA, games | monitor, SLA |
| B-21 | monitor, SLA | monitor |
| B-22 | SLA, pattern three | monitor |
| B-26 | N/A | monitor, SLA |
| B-28 | waste of time, difficult to move ahead | monitor |
| K-1 | N/A | monitor, SLA, pattern three |
| K-2 | monitor, SLA, pattern three | monitor, SLA, pattern three |
| R-1 | monitor, pattern three | SLA |
| R-2 | | |
| R-3 | | monitor, division of the blackboard, seating |
| R-5 | | |
| R-8 | | |
| R-9 | | monitor, division of the blackboard, seating |
| R-10 | | monitor, division of the blackboard, seating |
| R-21 | | monitor, SLA |
| R-22 | | |
| R-23 | | |
| total | 16 | 18 |

Table 10-10 Knowledge concerning multigrade teaching of multigrade teacher-trainees in Kavre district

| Kavre | multigrade teachers | |
|---|---|---|
| trainees | before | after |
| 1 | monitor, SLA, pattern three | monitor, timetable, alternatively SLA |
| 2 | SLA, pattern three | monitor or SLA |
| 3 | SLA, pattern four | monitor, SLA, pattern three |
| 4 | SLA | monitor, group work, pattern four, |
| 5 | | monitor |
| 11 | seating arrangements | monitor, group work, seating arrangement, use of blackboard |
| 12 | SLA, timetable, pattern two | Monitor |
| 14 | N/A | more time with G1 and other students with monitor |
| 15 | SLA, pattern three | more time with G1 and other students with monitor |
| 20 | monitor, SLA, pattern two | Monitor |
| 22 | SLA, pattern three | monitor, groups |
| 23 | SLA | |
| 28 | monitor, SLA | Monitor |
| total | 12 | 13 |

In Kavre district, most multigrade teacher-trainees answered the question on teaching techniques both before and after the training (Table 10-10). Eleven multigrade teacher-trainees answered the question before the training and 12 trainees answered after the training, i.e. most seem to have known certain techniques for multigrade teaching before the training. However, the content of the answers changed slightly. Before the training, the answers of different trainees varied. Suggested class organisation, for example, ranged from pattern two to four, and techniques included monitors, SLA, timetable, etc. After the training the answers converged. For instance, all trainees who answered the question mentioned the monitor.

Moreover, the answers given before the training tended to be confined to a short sentence. After the training, some of the trainees described techniques in much more detail.

> "If it is the first period, the students are gathered in the courtyard of the school and pray. After that I will select a monitor and give the necessary instructions to him. If two or more grades have to be put in a classroom, I will place one group at one corner and another group at another corner. The third group, if any, will be put in the middle of the classroom. I will divide the blackboard into three parts." (Nuwakot-R3, R10, multigrade).

The training clearly influenced the answers of multigrade teacher-trainees. They gained new knowledge or recalled existing knowledge. Their attitude towards answering this question was certainly stimulated by the training. However, whether the teachers implement this newly acquired or recalled knowledge concerning multigrade teaching in their classrooms is another question. For instance, the trainees cited above (Nuwakot-R3 and R10) wrote about an assembly in the courtyard and arranging three grades in one classroom. However, the implementation of this in their school seems hardly realistic. They teach in two different primary schools, but neither school organises assemblies. Both schools have five classrooms for five grades and each grade is seated in an individual classroom. Their classrooms are very small, tightly packed with heavy, long tables attached to benches and placed in rows. There is no room to move the furniture and create space for groups. Their answers are 'correct' in relation to the training material and what is taught in the training, but implementation in the classroom is not evident given the actual teaching conditions. Therefore, it is necessary to compare practice in the classroom before and after the training.

### 10.2.4 Competence to apply and act on newly acquired knowledge

Before revisiting the classrooms, the ability of the trainees to act on the knowledge acquired was studied in the practice teaching sessions during the last three days of training. Table 10-11 shows that most of the trainees conducted multigrade teaching with AMT and T classes, and provided SLA for the AMT class (pattern three). Three trainees, Nuwakot-B3, Nuwakot-B9 and Nuwakot-B21, assigned SLA to both grades and frequently visited both grades (pattern four). Significantly, all trainees set SLA. This is because all of them looked after two or more grades at the same time during the practice lesson.

Table 10-11 Practice teaching in Nuwakot district

| | duration of the lessons (minutes) | class organisation | SLA | monitor | instructions for the monitor | answer keys | group work | check | lesson plans |
|---|---|---|---|---|---|---|---|---|---|
| training material | not mentioned | AMT, T classes | √ | √ | √ | | √ | | √ |
| MTOT trainer | 21 | AMT, T classes | √ | √ | √ | √ | √ | √ | |
| RCT trainer | 10 | AMT, T classes | √ | √ | √ | √ | | √ | |
| multigrade (B-2) | 15 | AMT, T classes | √ | √ | | | | √ | |
| multigrade (B-3) | 17 | frequent visits | √√ | √ | √ | √ | √ | √√√√ | |
| multigrade (B-21) | 24 | ad-hoc | √√ | | | | | √√ | |
| multigrade (B-22) | 24 | AMT, T classes | √ | √ | | | | √ | |
| multigrade (B-26) | 25 | AMT, T classes | √ | √ | √ | | | √ | |
| multigrade (B-28) | 26 | AMT, T classes | √ | | | | | √ | |
| multigrade-experience (B-5) | 17 | AMT, T classes | √ | √ | | | | √ | |
| multigrade-experience (B-13) | 22 | AMT. T classes | √ | | | | | √ | |
| multigrade-experience (B-23) | 21 | AMT, T classes | √ | √ | √ | √ | | √ | |
| monograde (B-1) | 17 | AMT, T classes | √ | | | | | √ | |
| monograde (B-4) | 15 | AMT. T classes | √ | √ | | | | | |
| monograde (B-6) | 22 | AMT, T classes | √ | | | | | √ | |
| monograde (B-7) | 18 | AMT, T classes | √ | √ | | | | | |
| monograde (B-8) | 15 | AMT, T classes | √ | √√ | | | | √ | |
| monograde (B-9) | 20 | frequent | √√ | √ | √ | | | √√ | |
| monograde (B-10) | 23 | AMT, T classes | √ | √ | | | | | |
| monograde (B-11) | 15 | AMT, T classes | √ | √ | | | | √ | |
| monograde (B-12) | 25 | AMT, T classes | √ | | | | | √ | |
| monograde (B-14) | 21 | AMT, T classes | √ | √ | | | | | |
| monograde (B-20) | 25 | AMT, T classes | √ | √ | | | | √ | |
| monograde (B-N/A) | 9 | AMT, T classes | √ | √ | √ | √ | | √ | |

Many trainees also appointed a monitor. However, whether the trainees really understood its function and meaning is not evident, because few trainees provided the monitor with answer keys or any instructions on what the monitor should do. In their practice lessons, although he/she was appointed, the monitor in fact did not play any active role. Moreover, one trainee (Nuwakot-B8) appointed monitors for both the AMT and the T class, even though he taught the T class directly. 'Monitor' was merely a name given to one of the students, but there was no significant role or responsibility attached to it.

On the whole, most trainees are capable of organising two or more grades, with a differentiation into ATM and T classes, and the provision of SLA to keep all grades continuously occupied. However, it is not evident whether they really understand the meaning of the techniques they have acquired. They acquired the knowledge which the training intends to impart, but their competence which incorporated this knowledge seemed to be just for the sake of the training. As a result, although they applied what they had learnt in the training, these imposed actions did not really help with their management of multigrade classes.

## 10.3 Performance of multigrade teaching in the classroom before and after the training

### 10.3.1 Class observation of five multigrade teacher-trainees

Since for this study visiting the classrooms of all 108 trainees was not feasible, five multigrade teacher-trainees, Nuwakot-B3, Nuwakot-B22, Nuwakot-R2, Kavre-4 and Kavre-12, were selected and their practice of multigrade teaching in the classroom was followed. The selected trainees represent average multigrade teachers (Table 10-12). Only ordinary teachers were selected, because headmasters/headmistresses are a minority (10 out of 104 trainees who answered the questionnaire (Table 7-8). None of them had taken Multigrade Teaching training before (Table 7-7). Their qualifications are SLC (Grade 10) or ICOM (Grade 12), which is the most common qualification for being a primary school teacher in Nepal, including the two districts (Table 5-5). Their teaching experience also represents the average of the primary schools visited (Tables 5-17 and 5-18). During the training, there was nothing remarkable, either positive or negative, about the five trainees. All five trainees attended the training regularly and without absence. None of them outstandingly led the

training, nor show obvious negative attitude against the training. Their attitude in the training is that of ordinary trainees.

Table 10-12 Information on the five trainees selected

| Trainees | gender | training | qualification | Experience (years) |
|---|---|---|---|---|
| Kavre-4 | male | 2.5 months | SLC | 10 |
| Kavre-12 | male | 5 months | ICOM | 11 |
| Nuwakot-B22 | male | 7.5 months, curriculum | SLC | 13 |
| Nuwakot-R2 | female | 2.5 months | SLC | 8 |
| Nuwakot-B3 | female | 2.5 months | ICOM | 6 |

The five trainees thus are quite similar, but the conditions in the schools where they are currently teaching are slightly different (Table 10-13). The most important difference lies in the pattern of class organisation. The schools in Kavre district use pattern two and the schools in Nuwakot district use patterns one and four. All schools have five grades, but the numbers of classrooms and teachers vary. The schools of Nuwakot district have five, but the schools in Kavre districts have fewer classrooms. The number of teachers ranges from two to four (Tables 5-7 and 5-8).[3]

Table 10-13 School information for the five trainees selected

| trainees | class organisation | grades | classrooms | teachers |
|---|---|---|---|---|
| Kavre-4 | pattern 2 | 5 | 2 | 4 |
| Kavre-12 | pattern 2 | 5 | 3 | 2 |
| Nuwakot-B22 | pattern 1 | 5 | 5 | 4 |
| Nuwakot-R2 | pattern 1 | 5 | 5 | 4 |
| Nuwakot-B3 | pattern 4 | 5 | 5 | 2 |

Concerning knowledge on multigrade teaching, Table 9-14 shows that all trainees except one, Nuwakot-R2, knew about techniques for multigrade teaching already before the training.[4] After the training, four trainees, i.e. all except Nuwakot-R2, mentioned monitors. Other techniques cited by them were group work, timetables and seating plan. This corresponds to what a majority of the other trainees showed in the evaluation forms (cf. Tables 10-3 to 10-10). This indicates that the trainees selected are indeed average trainees and that they acquired knowledge on multigrade teaching through the training.

[3] These indicators are standard for the 14 primary schools visited during the mini case studies.
[4] All four trainees mentioned SLA.

Table 10-14 Knowledge concerning multigrade teaching of the five trainees selected

| trainees | knowledge before the training | knowledge after the training | most "impressive" components of the training |
|---|---|---|---|
| Kavre-4 | SLA | monitor, pattern four, group work | monitor, SLA |
| Kavre-12 | SLA, timetable, pattern two | monitor | timetable |
| Nuwakot-B22 | SLA, pattern three | monitor | seating plan |
| Nuwakot-R2 | | | |
| Nuwakot-B3 | monitor, SLA, games | monitor, SLA | SLA |

10.3.2 Trainee Kavre-12

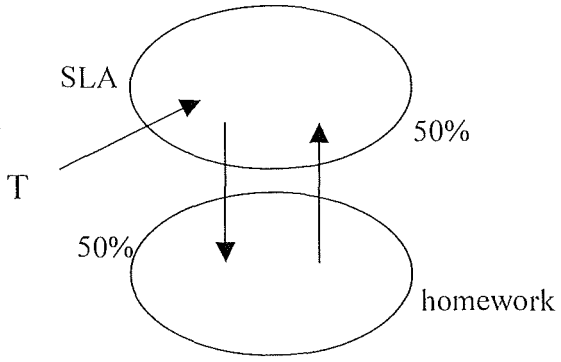
In the school of trainee Kavre-12, the main strategy of class organisation in the school is pattern two. Table 10-15 shows that trainee Kavre-12 did not organise his multigrade classes as AMT and T classes (pattern three) after the training. Moreover, he did not adopt the techniques for multigrade teaching introduced by the training, i.e. monitor, clear instructions, answer keys for the monitor, and group work.

Table 10-15 Multigrade class organisation and adaptation of training components by Trainee Kavre-12

| models | duration of the lessons (minutes) | class organisation | SLA | monitor | instructions for the monitor | answer keys | group work | check | lesson plans |
|---|---|---|---|---|---|---|---|---|---|
| training material | not mentioned | AMT, T classes | √ | √ | √ | | √ | | √ |
| MTOT trainer | 21 | AMT, T classes | √ | √ | √ | √ | √ | √ | |
| RCT trainer (Kavre) | 19 | frequent visits (pattern four) | √ | √ | | | | √ | |
| before training | 28 | pattern two (Nepalese) | | | | | | | |
| one month after training | 21 | pattern two (mathematics) | | | | | | | |
| eight months after training | 39 | pattern two (s/s)+SLA | √ | | | | | √ | |
| | 52 | pattern four (mathematics) | √√√√√ | | | | | √√√√√ | |
| | 48 | pattern two (s/s)+SLA | √ | | | | | | |
| | 41 | pattern four (mathematics) | √√√√√ | | | | | √√√√√ | |
| | 40 | pattern two (s/s)+SLA | √ | | | | | √ | |
| | 43 | pattern four (mathematics) | √√√ | | | | | √√√ | |
| | 43 | pattern two (s/s)+SLA | √ | | | | | √ | |
| | 52 | pattern four (mathematics) | √√√√√ | | | | | √√√√√ | |

However, the training influenced the trainee Kavre-12 in terms of his feeling of responsibility for two grades. His class organisation certainly moved on the ladder of multigrade class organisation from 'pattern two' before the training to 'pattern two plus SLA' after the training (Figure 10-1). Specifically he increased the extent of his responsibility for two grades. Before the training, he just divided the lesson period into two parts and taught social studies to two grades in turn. While he taught one grade, he did not pay attention to the other grade and did not provide SLA for it. After the training, he still taught the two grades in turn within one lesson period. However, before starting teaching for the first grade, he provided SLA for the other grade. When he finished teaching the first grade, he checked on the SLA of the other grade before starting teaching for it.[5] When he finished teaching the first grade, he seemed to think that the lesson for this grade was finished. However, although he did not look after the first grade during the second half of the lesson, normally the students did receive homework and started working on it. This means that students of the two grades had always SLA or homework to keep them occupied during the whole lesson period.

Figure 10-1 Multigrade class organisation 'Pattern 2+SLA'




Before the training, he assumed responsibility for each grade only for half of a lesson period. After the training, he looked after the two grades for the whole lesson period. Now, has he increased his responsibility to the level of patterns four and five in the ladder of multigrade class organisation, achieving control over two grades simultaneously, or does he remain yet at the level of pattern three which he fails to control completely?

Table 10-16 shows the content and amount of SLA that trainee Kavre-12 provided to the grade which he taught as a second group. In comparison with the situation before the

[5] He did not check on SLA during one lesson, because SLA was 'reading the textbook aloud.'

training, the time students of the group were occupied definitely increased. However, the students are engaged in SLA for some time, but since the students are working individually on the assigned SLA, the overall speed and achievement depend on each student.

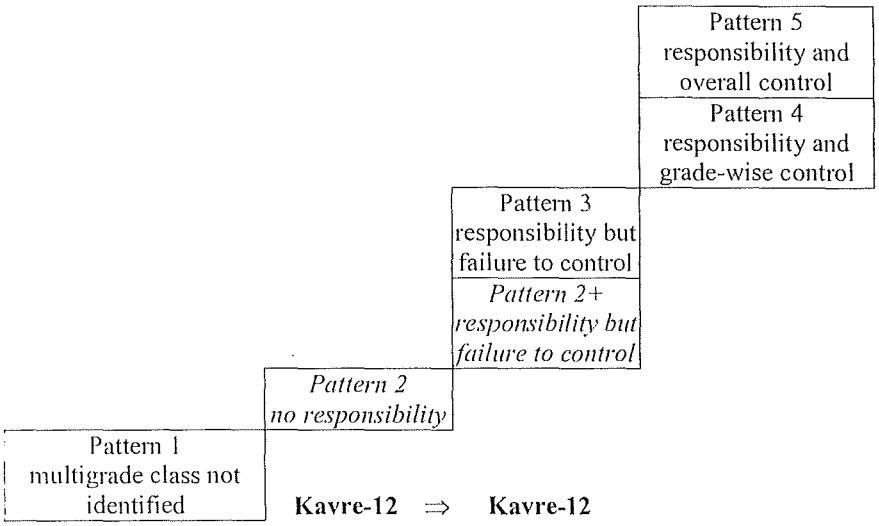
This is because the quality and amount of SLA were on the whole not appropriate. The content of SLA is normally to copy or read the textbook, and do one exercise from the textbook. Moreover, trainee Kavre-12 assigned units which the students had not yet studied. For instance, one day for social studies he assigned an example from page 120. This is the introduction of a unit the students had not yet studied. Their task was just copying the example. In the event the students simply copied that page without any understanding. For trainee Kavre-12, the goal of SLA is 'killing the time the students are alone' rather than organising constructive self-learning. The goal of 'killing time' does not motivate the students to self-learn.

Table 10-16 Content and amount of SLA provided by trainee Kavre-12, pattern 2

| Kavre-12 | duration of the lessons | subjects | time for 2nd grade | time for 1st grade | time 2nd grade students are engaged | SLA for the 2nd grade | check |
|---|---|---|---|---|---|---|---|
| before the training | 28 | Nepalese | 0 | 16 | 0 | | |
| after the training | 21 | mathematics | 0 | 13 | 0 | | |
| | 39 | Social studies | 1 | 18 | 18 | copying text from the textbook | √ |
| | 48 | Social studies | 1 | 30 | 17 | reading the textbook aloud | |
| | 40 | Social studies | 1 | 22 | 7-20 | page 72, exercise 1 | √ |
| | 43 | Social studies | 1 | 23 | 12 | page 120, example 1 | √ |

On the whole, trainee Kavre-12 increased the extent of his simultaneous responsibility for two grades. His multigrade class organisation moved up on the ladder. However, it does not reach the level of pattern four and five where two grades are fully engaged. As Figure 10-2 shows, trainee Kavre-12 moved from 'pattern two' to 'pattern two plus' after the training.

Figure 10-2 Movement of trainee Kavre-12 on the ladder of multigrade class organisation




10.3.3 Trainee Kavre-4

Table 10-17 Multigrade class organisation and adaptation of training components by Trainee Kavre-4

| Models | duration of the lessons (minutes) | class organisation | SLA | monitor | instructions for the monitor | answer keys | group work | check | lesson plans |
|---|---|---|---|---|---|---|---|---|---|
| training material | not specified | AMT, T classes | √ | √ | √ | | √ | | √ |
| MTOT trainer | 21 | AMT, T classes | √ | √ | √ | √ | √ | √ | |
| RCT trainer (Kavre) | 19 | frequent visits (pattern four) | √ | √ | | | | √ | |
| before the training | 28 | pattern four (mathematics) | √√ | | | | | √√ | |
| | 25 | pattern two (health) | | | | | | | |
| one month after the training | 30 | pattern two (Nepalese) | | | | | | | |
| eight months after the training | 50 | pattern four (mathematics) | √√√√√ | | | | | √√√√√ | |
| | 43 | pattern two (mathematics) | √√ | √√ | | | | √ | |
| | 45 | pattern two (mathematics) | √ | √ | | | | | |
| | 41 | pattern two (mathematics) | | √ | | | | | |
| | 45 | pattern two (Nepalese) | | | | | | √ | |

In the school of trainee Kavre-4, the main strategy of class organisation of the teachers in the school is in general pattern two, with pattern four for mathematics and pattern five for extra curricular subjects. Table 10-17 shows that trainee Kavre-4 also does not change his organisation of multigrade classes after the training. In three lessons after the training he

appointed a monitor. He did not give clear instructions or answer keys to the monitor, which means that the student was a monitor rather in name only and did not fulfil his role. Therefore it is not certain whether the trainee understands the meaning of the appointment of a monitor. Since the monitor did not function, his appointment did not improve the multigrade teaching of trainee Kavre-4. It is also not certain whether he regularly appoints a monitor. Moreover, he did not provide SLA systematically either. On the whole his responsibility for two grades at the same time has not improved significantly.

### 10.3.4 Trainees Nuwakot-B22 and Nuwakot-R2

In the school of trainee Nuwakot-B22 and Nuwakot-R2, the main strategy of class organisation by the teachers is pattern one. The multigrade class of trainees Nuwakot-B22 and Nuwakto-R2 is very difficult to identify as multigrade.

Table 10-18 Multigrade class organisation and adaptation of training components by Trainee Nuwakot-B22

| Models | duration of the lessons (minutes) | class organisation | SLA | monitor | instructions for the monitor | answer keys | group work | check | lesson plans |
|---|---|---|---|---|---|---|---|---|---|
| Training material | not mentioned | AMT, T classes | √ | √ | √ | | √ | | √ |
| MTOT trainer | 21 | AMT, T classes | √ | √ | √ | √ | √ | √ | |
| RCT trainer (Nuwakot) | 10 | AMT, T classes | √ | √ | √ | √ | | √ | |
| practice teaching (B-22) | 24 | AMT, T classes | √ | √ | | | | √ | |
| before the training | 11 | pattern one (health) | | | | | | | |
| | 30 | AMT, T classes (skill) | √ | | | | | √ | |
| | 24 | pattern five (health) | | | | | | | |
| three months after the training | 58 | AMT, T class (s/s) | √ | √ | | | | √ | |

Since the trainee Nuwakot-B22 has attended the training and acquired some components from it, a certain number of their lessons were identifiable as multigrade classes in the post-training class observations. Table 10-18 shows that after the training, he organised his multigrade classes as AMT and T classes, with appointment of a monitor in practice teaching and also in one lesson after the training. However, he did not give clear instructions or answer keys to the monitor, which again means that the student was a monitor rather in name only and could not fulfil his role. He appointed a monitor also for his monograde class.

Whether the trainee understands the meaning of the appointment of a monitor is not certain. Since the monitor could not function, his appointment did not improve the multigrade teaching of trainee Nuwakot-B22.

There is no single style of multigrade teaching which can be identified for trainee Nuwakot-R2. Table 10-19 shows that even after the training, trainee Nuwakot-R2 did not organise her multigrade class as AMT and T classes. Moreover she did not use multigrade teaching, but pseudo-monograde teaching according to pattern one. Although patterns two and four were observed during class observation, the basic class organisation of her multigrade classes remained pattern one. It is difficult to identify multigrade classes in her school.

Table 10-19 Multigrade class organisation and adaptation of training components by Trainee Nuwakot-R2

| Models | duration of the lessons (minutes) | class organisation | SLA | monitor | instructions for the monitor | answer keys | group work | check | lesson plans |
|---|---|---|---|---|---|---|---|---|---|
| Training material | not mentioned | AMT, T classes | √ | √ | √ | | √ | | √ |
| MTOT trainer | 21 | AMT, T classes | √ | √ | √ | √ | √ | √ | |
| RCT trainer (Nuwakot) | 10 | AMT, T classes | √ | √ | √ | √ | | √ | |
| before the training | 37 | pattern two (Nepalese, English) | √ | | | | | √ | |
| | 19 | pattern one (mathematics) | | | | | | | |
| | 30 | pattern two (Nepalese, English) | √ | | | | | √ | |
| three months after the training | 27 | pattern one (Nepalese) | | | | | | | |
| | 49 | pattern four (Nepalese, English) | √ | √ | √ | | | √ | |

In schools with pattern one, multigrade classes are not identifiable, because multigrade teaching does not take place within one class unit. The school has multigrade teaching, but individual teachers are not multigrade teachers as such. In this kind of structure, it is almost impossible for an individual teacher to implement the innovations demanded in the training. Thus the multigrade teaching of the trainees Nuwakot-B22 and Nuwakot-R2 does not seem to have changed after the training, because of the absence of structural change in multigrade teaching at their school.

### 10.3.5 Trainee Nuwakot-B3

Table 10-20 Multigrade class organisation and adaptation of training components by Trainee Nuwakot-B3

| models | duration of the lessons (minutes) | class organisation | SLA | monitor | instructions for the monitor | answer keys | group work | check | lesson plans |
|---|---|---|---|---|---|---|---|---|---|
| training material | not mentioned | AMT, T classes | √ | √ | √ | | √ | | √ |
| MTOT trainer | 21 | AMT, T classes | √ | √ | √ | √ | √ | √ | |
| RCT trainer (Nuwakot) | 10 | AMT, T classes | √ | √ | √ | √ | √ | √ | |
| practice teaching (B-3) | 17 | frequent visits | √√ | √ | √ | √ | √ | √√√√ | |
| before the training | 30 | pattern one (math) | | | | | | | |
| | 23 | pattern one (English) | | | | | | | |
| | 24 | pattern one (English) | | | | | | | |
| | 27 | pattern one (mathematics) | | | | | | | |
| | 29 | pattern one (English) | | | | | | | |
| | 32 | pattern two (English) | | | | | | | |
| three months after the training | 40 | AMT, T classes (English) | √ | √ | √ | √ | | √ | |
| | 27 | pattern five (health) | | | | | | | |
| | 35 | AMT, T class (English) | √ | √ | √ | | | √ | |
| | 28 | pattern five (health) | | | | | | | |

Trainee Nuwakot-B3 visibly changed her technique of multigrade teaching from pattern one to pattern three. Before the training, she did not identify her multigrade classes as multigrade and conducted teaching according to pattern one. After the training however, she identified the multigrade classes and differentiated ATM and T classes (pattern three). She provided SLA and appointed a monitor, providing instructions and answer keys to him. She checked the SLA of her English lessons. She did not appoint the monitor herself, but asked the class who was to be the monitor of the day. The students then suggest somebody as monitor. The system of monitors seems familiar to the students. Moreover, while trainee Nuwakot-B3 was teaching the other grade, the monitor checked the notebooks of her classmates using the answer keys. It is plausible therefore to assume that the system of monitoring is well integrated into her teaching.

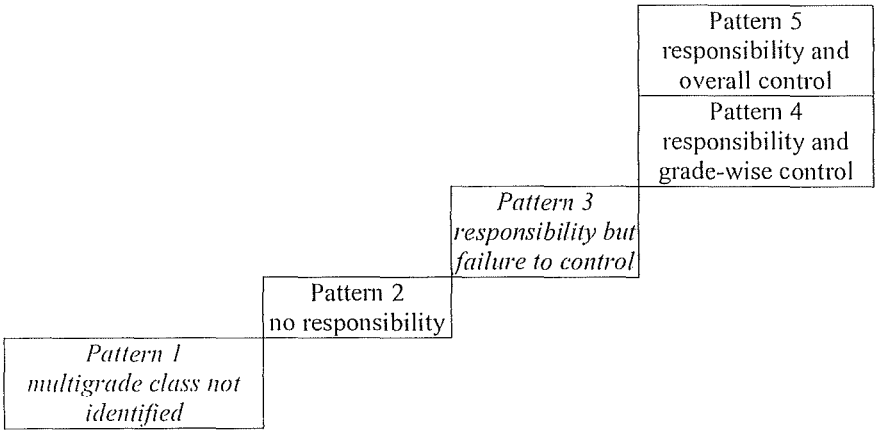
Table 10-21 shows that the content of SLA set by trainee Nuwakot-B3 is not limited to copying or reading from the textbook. Yet the amount of SLA is not always sufficient to cover the whole self-learning time. For the second lesson in this example, the amount of SLA was sufficient to cover the whole self-learning time, and indeed the students did not finish all

of it. The reason why the teacher needed 12 minutes to check the SLA of the AMT class were the inappropriate instructions for it. When she checked the answers, it emerged that most students had not understood what they should have done, and most of their answers were wrong. Therefore, she had to explain everything once again.

Table 10-21 Content and amount of SLA provided by trainee Nuwakot-B3, pattern three

| B-3 | duration of the lessons | subjects | time for AMT class | time for T class | time used for SLA | SLA for AMT class | check |
|---|---|---|---|---|---|---|---|
| after the training | 40 | English | 10 | 25 | 13 | filling in 12 blanks | 5 |
| | 35 | English | 5 | 18 | 18 | 4 questions | 12 |

Figure 10-3 Movement of trainee Nuwakot-B3 on the ladder of multigrade class organisation




On the whole, trainee Nuwakot-B3 increased her extent of simultaneous responsibility for two grades. Her multigrade class organisation moved up on the ladder. However, it did not reach the level of patterns four and five, fully occupying two grades at the same time. Therefore, as Figure 10-3 shows, trainee Nuwakot-B3 moved from 'pattern one' to 'pattern three' after the training.

Like trainees Nuwakot-B22 and Nuwakot-R2, trainee Nuwakot-B3 conducted multigrade teaching according to pattern one before the training. However, trainees Nuwakot-B22 and Nuwakot-R2 did not fundamentally change their multigrade class organisation after the training while trainee Nuwakot-B3 did. This difference may not be due to personal differences, but rather to the differences in the type of multigrade school where they teach.

Before the training, trainee Nuwakot-B3 organised multigrade classes according to pattern one, because she used to work in a school using this pattern. In the year before her training course she was transferred from the school using pattern one to her current school using pattern four. However, even after transfer, trainee Nuwakot-B3 continued to manage multigrade classes according to pattern one, because this was the only method she was familiar with. As a result, before the training, she was teaching according to pattern one in a school using pattern four. During training, she learnt about new management methods such as AMT and T classes, and techniques like SLA and the appointment of a monitor. After the training she adopted these new techniques and started to manage two or more classes at the same time.

10.3.6 Other changes in the classroom after the training

Table 10-22 Changes in the classroom of trainee Kavre-12 after the training

| | duration of the lessons (minutes) | class organisation | changes |
|---|---|---|---|
| before the training | 28 | pattern two (Nepalese) | |
| one month after the training | 21 | pattern two (mathematics) | |
| eight months after the training | 39 | pattern two (s/s)+SLA | |
| | 52 | pattern four (mathematics) | |
| | 48 | pattern two (s/s)+SLA | |
| | 41 | pattern four (mathematics) | illustration with drawing of objects |
| | 40 | pattern two (s/s)+SLA | |
| | 43 | pattern four (mathematics) | |
| | 43 | pattern two (s/s)+SLA | |
| | 52 | pattern four (mathematics) | |

The previous sub-sections have tried to evaluate change with regard to multigrade teaching. Since the training package includes also material on other topics, the present sub-section will try to trace other forms of change in the classroom, before and after the training. Table 9-22 shows that trainee Kavre-12 changed his teaching at best minimally. His teaching method is reading out the textbook and copying text or figures from the textbook to the blackboard. After the training he drew two figures on the blackboard to explain the cubic volume of water.

For the same topic, trainee Kavre-4 used real materials and did experiments (Table 10-23). He brought a plastic tank filled with water and plastic cups into the classroom to demonstrate experiments on the cubic volume of water. Since trainee Kavre-4 generally followed the textbook and did not use other teaching material to teach – besides the blackboard and the textbook –, his experimentation was probably motivated by the 'learning by doing' section of the training programme.

Table 10-23 Changes in the classroom of trainee Kavre-4 after the training

| | duration of the lessons (minutes) | class organisation | changes |
|---|---|---|---|
| before the training | 28 | pattern four (mathematics) | |
| | 25 | pattern two (health) | |
| one month after the training | 30 | pattern two (Nepalese) | descriptions through the drawing of objects |
| eight months after the training | 50 | pattern four (mathematics) | |
| | 43 | pattern two (mathematics) | |
| | 45 | pattern two (mathematics) | 'learning by doing' experiment with water |
| | 41 | pattern two (mathematics) | |
| | 45 | pattern two (Nepalese) | descriptions through the drawing of objects |

Trainee Nuwakot-B22 also integrated experiments into his lessons (Table 10-24). For the topic on the five senses, he brought real plants into the classroom for the students to see, smell, and touch. He also used wooden alphabet cards for his English lessons.

Table 10-24 Changes in the classroom of trainee Nuwakot-B22 after the training

| | duration of the lessons (minutes) | class organisation | changes |
|---|---|---|---|
| practice teaching (B-22) | 24 | AMT, T classes | |
| before the training | 11 | pattern one (health) | |
| | 30 | AMT, T class (skills) | |
| | 24 | pattern five (health) | |
| three months after the training | 58 | AMT, T class (s/s) | descriptions through the drawing of objects |
| | 48 | monograde (English) | wooden cards provided by DEO, monitor |
| | 44 | monograde (environment) | 'learning by doing' experiment with real plants |
| | 40 | monograde (environment) | 'learning by doing' experiment with real plants |

Also trainee Nuwakot-R2 used alphabet pocket cards (Table 10-25). Before the training, for

the same type of language lessons, she never used any teaching material, apart from the blackboard and the textbook. She used the pocket cards during the first lesson observed after the training, although she was not successful.

Table 10-25 Changes in the classroom of trainee Nuwakot-R2 after the training

| | duration of the lessons (minutes) | class organisation | changes |
|---|---|---|---|
| before the training | 37 | pattern two (Nepalese, English) | |
| | 19 | pattern one (math) | |
| | 30 | pattern two (Nepalese, English) | |
| three months after the training | 36 | monograde (Nepalese) | pocket cards introduced by another training programme |
| | 27 | pattern one (Nepalese) | |
| | 49 | pattern four (Nepalese, English) | |

Table10-26 Changes in the classroom of trainee Nuwakot-B3 after the training

| | duration of the lessons (minutes) | class organisation | Changes |
|---|---|---|---|
| practice teaching (B-3) | 17 | frequent | |
| before the training | 30 | pattern one (mathematics) | |
| | 23 | pattern one (English) | |
| | 24 | pattern one (English) | games |
| | 27 | pattern one (mathematics) | |
| | 29 | pattern one (English) | |
| | 32 | pattern two (English) | |
| after the training | 32 | monograde (English) | handmade cards to form sentences, group work |
| | 40 | AMT, T classes (English) | picture cards from DEO, role playing |
| | 27 | pattern five (health) | |
| | 35 | AMT, T class (English) | |
| | 28 | pattern five (health) | |

Trainee Nuwakot-B3 also used new teaching material for her first lessons observed after the training. Unlike trainee Nuwakot-R2, she was able to use the material effectively. She also adopted group work for her monograde class. The activities which she introduced to her lessons suggest that her teaching was stimulated by the training. However, as with trainee Nuwakot-R2, the influence of the training was seen only during the first lessons observed

and faded away in later lessons. This suggests that even where the training is effective, changes are not permanently implemented in the classroom.

## 10.4 Trainer evaluation concerning the impact of the training course

The observation in the classrooms of the five trainees selected suggests that all of them were stimulated by the training. Two of the five trainees also increased the extent of their responsibility for the multigrade teaching. In order to check on the plausibility of these results, focus group discussions were organised with all RCT trainers of Nuwakot and Kavre districts.

*Nuwakot district*

All trainers thought class organisation after the training was improved. According to the trainers, before the training, teachers were confused about multigrade teaching, but after the course the teachers used an organisation with *AMT and T classes*. *The monitor* is indeed one of the most significant improvements commented on by the trainers. The trainers said that the monitor system existed already before the training, but that monitors were simply appointed to look after a class. After the training, the teachers systematically gave instructions to the monitor. They also assign more *SLA* to the students. After the training, the teachers have a more positive attitude and a more active behaviour after the training. Some trainers were impressed by a significant change in *the local community*.

*Kavre district*

Although some change was mentioned, the trainers have a strong negative perception of multigrade teaching. They do basically not expect that the training will improve teaching in multigrade schools. According to the trainers, the influence of the training is not very visible. However all trainers admit that the provision of *SLA,* the appointment of *monitors,* and the making of *timetables* improved after the training. One trainer said that before the training, the lesson time was not fully used, but that after the training, the teacher divided the lesson period equally and did provide SLA. This description suggests that *pattern two plus* was observed also by the trainer of this RC.

## 10.5 Conclusion

This chapter has evaluated Multigrade Teaching Training in terms of training output, examining the effectiveness of the diffusion-oriented model. It can be said in conclusion that the training does have some impact on the knowledge, competence of many trainees and classroom performance of some trainees.

Comparing *knowledge* of the trainees before and after the training, it is clear that the trainees generally acquired some knowledge through the training. A difference in terms of knowledge between before and after the training was perceptible. The training certainly stimulated the trainees. Although the training curriculum was not new for some trainees, they still gained new knowledge, and others recalled existing knowledge. More trainees mentioned *SLA, monitors, and timetables* after the training. In both districts, more multigrade teacher-trainees answered the question on multigrade teaching after the completion of training. Trainees gained new knowledge or became more confidence with their answers, and the answers converged.

The trainees generally acquired average *competence* through the training. Most trainees were able to apply the knowledge acquired in the practice teaching sessions. During practice teaching, most trainees were capable of organising two or more grades, differentiating between *ATM and T class* and *providing SLA* to keep all grades simultaneously occupied, although the change in their teaching actions remained rather superficial.

Regarding to *performance*, two trainees slightly increased the extent of their responsibility in multigrade teaching in the five selected classrooms. Trainee Nuwakot-B3 moved up the ladder of multigrade class organisation from 'pattern one' to 'pattern three.' Trainee Kavre-12 moved up the ladder from 'pattern two' to 'pattern two plus SLA.' However, trainees in schools using teaching pattern one could not implement innovations in the classroom without structural changes affecting multigrade teaching in the whole school. As a sub-effect of the training, the trainees were attracted by the concept of 'doing and learning.' Natural materials, experimentation, teaching materials, including wooden alphabet cards, alphabet pocket cards, and original handmade materials were used in the classroom.

# Chapter Eleven
# Conclusion

This thesis has addressed five research questions. First, what are the contemporary and historical characteristics of multigrade teaching in the education system of Nepal? Second, what are the characteristics of multigrade primary schools in Nepal? Third, what are the characteristics of multigrade teaching in classrooms in Nepal? Fourth, what are the characteristics of current teacher training? Fifth, do training policies address the problems of multigrade classrooms and improve knowledge, competence and performance of teachers in multigrade classrooms in Nepal?

Chapter Three has analysed the system characteristics of multigrade teaching in Nepal (RQ1). Chapters Five and Six have analysed the current practice of multigrade teaching (RQ2, 3). Chapters Seven, Eight, Nine and Ten have analysed teacher training (RQ4, 5). This final chapter synthesises the findings. The first section synthesises the findings in relation to the research questions. The second places these findings in the context of the broader literature on multigrade teaching. The third proposes recommendations for the practical implementation of teacher training and for further research on multigrade teaching.

## 11.1 Learning from the findings on multigrade teaching practice and training

### 11.1.1 System characteristics of multigrade teaching in Nepal

This sub-section synthesises findings from Chapter Three. It highlights issues like the extent of multigrade teaching, the problem in quality of education and multigrade teaching, the absence of policies for multigrade teaching. It also treats multigrade teaching as a reality, looking at strategies for multigrade teaching already implemented in Nepal.

*Prevalence of multigrade teaching*

Nepal does not systematically collect information on the extent of multigrade teaching. The only available national figures which allow to estimate its extent are teacher-school ratios (3.2.1). The 1998 national teacher-school ratio of 3.8 (Table 3-5), including Kathmandu valley and other urban areas, also suggests the prevalence of multigrade teaching. In

Nuwakot district, the teacher-school ratio was 2.8 in 1998 (Table 5-1). In Kavre district, the teacher-school ratio was 2.6. This study has calculated that multigrade teaching in Nuwakot and Kavre districts is indeed prevalent (5.1). In 2000, 94.66% of public primary schools in Nuwakot district were multigrade schools (Table 5-4). In 2001, 84.71% of schools in Kavre district were multigrade schools. The extent of multigrade teaching in Nepal is in fact increasing (3.2.2).

*Quality of education and multigrade teaching*

Since multigrade teaching is so prevalent, the overall quality of education in Nepal is significantly related to the quality of multigrade teaching. In primary education, internal efficiency and student learning achievement is generally low (3.2.3). Student learning achievement is consistently related to the amount of time available for teaching and learning and on how this time is used (Lockheed et al., 1991). This study shows that students in multigrade classrooms have less learning time than the theoretical time available according to the timetable (6.2). Thus time on task in multigrade teaching is crucial in order to improve student achievement. The problems of non-enrolment, dropout and low learning achievement are particularly acute among girls, children from the poorest households and socially disadvantaged communities (3.2.4). Multigrade schools are a means for enrolling girls, minorities and low castes who cannot enrol in the larger monograde schools. Thus multigrade teaching is one of the keys to the improvement of access to, equity and quality of education in Nepal.

*Lack of policies on multigrade teaching*

Despite its significance, multigrade teaching is negatively perceived by policy makers, resource persons, teachers and community members (2.6.1, 6.5.1, 9.3.3, 10.4). Although a graded school system was introduced only in the early 1950s and the National Education System Plan in 1971 did not guarantee the allocation of one teacher to each grade (3.3.1), monograde teaching has dominated thinking in Nepal, just as in for example the Maldives and Uganda (2.6.1). Multigrade teaching was never officially planned for in the education system so that no national policy has been formulated for multigrade teaching (2.7.1).

*Reality and implementation of strategies for multigrade teaching*

In reality, the supply of teachers has never been able to match the rapid expansion of primary

education (3.3.2). A number of teachers sufficient for all grades could never be allocated. The teacher-school ratio has not improved since 1951 (3.3.3). Although no national policy was formulated for multigrade teaching, major strategies to support multigrade teaching emerged in the late 1980s (3.3.4). In the early 1990s, BPEP 1 provided two types of in-service teacher training supporting multigrade teaching. In 1999, multigrade teaching became one of the key features of BPEP 2 (3.3.5). Currently, BPEP 2 implements two types of refined in-service teacher training for multigrade teaching (3.4). One is the ten-month Basic Primary Teacher Training for all primary school teachers. The other is the ten-day Multigrade Teaching Training for teachers with particular needs.

This sub-section has synthesised information on the system-wide characteristics of multigrade teaching in Nepal. The prevalence of multigrade teaching has been established. Overall quality of education is significantly related to the quality of multigrade teaching. Despite the lack of policies for multigrade teaching, multigrade teaching exists as a reality, and teacher training as a strategy for multigrade teaching has been developed. The next sub-section will synthesise information on the realities of multigrade teaching in Nepal.

### 11.1.2 Practice of multigrade teaching

This sub-section synthesises findings from chapters Five and Six. Based on the case studies, it summarises the diversity of physical facilities in multigrade schools, the five different patterns of multigrade class organisation observed, the problems of multigrade teaching in the classroom, as well as potential solutions.

*Diversity of physical facilities in multigrade schools*

In Nepal, the community is expected to financially support the school with regard to physical facilities and teaching material. In the case study districts, the communities have constructed the school buildings (5.2.3). The differences in classroom conditions cause different seating arrangements for the students, as well as different combinations of multigrading (6.1.2). In Kavre district, the quality of the facilities is diverse and depends on the financial capacity of the community and the availability of support from the community (5.2.3). As a result, some schools have five classrooms, while others have fewer classrooms than the number of grades in the school (5.2.2). When there are not enough classrooms for all grades, multigrade

students are seated in the same classroom (6.6.1, 6.6.4). By contrast, since Nuwakot district has received longer and more intensive support from BPEP, there is less diversity of condition of buildings and the number of classrooms there normally corresponds to the number of grades (5.2.2). As there are enough classrooms for all grades, multigrade students are seated grade-wise in separate classrooms (6.6.1, 6.6.4).

*Five patterns of multigrade class organisation*

The different seating arrangement for the students and the grade combinations for multigrade teaching create different space and time boundaries for multigrade classes. These conditions also determine the extent of teacher responsibility for multigrade teaching. According to the extent of responsibility of the teacher, multigrade classes are differently organised.

This study has identified five different patterns of multigrade class organisation (6.2). The extent of responsibility for multigrade teaching of the teacher increases from pattern one to patterns four and five (6.4.2). In pattern one, the teachers divide their teaching day by the number of grades they have to cover, and teach each grade individually, one after the other. As students from different grades are seated in different classrooms, they do not really constitute a multigrade class. They in fact do not realise that they are responsible for two or more grades simultaneously.

In pattern two, students from different grades are seated in the same classroom. Although students of different grades are in the same room, the teachers do not realise their responsibility for one multigrade class as a whole. Teachers divide the lesson period of the multigrade class equally into two time sections and teach each grade group separately, as if they were teaching two monograde classes.

In pattern three, two or more grades are treated as 'a multigrade class.' One grade is considered the 'main teaching class,' the others as 'additional classes.' During the first few minutes of the period, the teachers assign Self-Learning Activity (SLA) to the additional class, then they go to the main teaching class. They recognise their simultaneous responsibilities for both grades. However, they fail to control the additional class, because of an inappropriate amount of SLA and because of its quality.

In pattern four, the teachers visit different classrooms frequently during one period. They also recognise their responsibility to simultaneously control a multigrade class. As for pattern five, subjects such as sports, music and arts are taught to a whole class. The teachers in pattern five identify two or more grades as a whole class and teach them together. However, pattern four is unsustainable because it requires a very heavy workload and pattern five is limited to subjects which have no grade-wise textbooks.

*Problems in multigrade classrooms*

My observations have established that while in the classroom, teachers in multigrade classes teach in the same way they use for monograde teaching (6.3.1). They teach using traditional lectures and copying from textbooks. Students usually work individually, partly because of the furniture which is arranged in rows: heavy wooden desks attached to benches (5.2.2, 6.1.1). The main teaching materials are the textbooks and the blackboard – although some schools have more teaching materials (5.2.4, 6.3.2). In fact, the qualification of multigrade teachers is same as or even above the national level (3.1.6, 5.2.7). When the teacher is present in the classroom, teaching activities in multigrade classrooms are the same as in standard monograde teaching (6.3.2). Thus, in my opinion, new teaching methods like learning by doing are not really an issue in multigrade teaching.

It seems to me that the most significant disadvantage of multigrade teaching when compared to monograde teaching is time constraint rather than teaching methods. In multigrade teaching there is a significant difference in the amount of time allocated to each grade (6.3.3). According to the teachers, too, the most significant problems in multigrade teaching are 'the lack of time to cover the lessons for several grades' and 'student control without teacher presence in the classroom.' The consequence of insufficient learning time is 'low student academic achievement (6.5)'.

*Teacher perceptions of potential solutions*

In order to improve multigrade teaching, the teachers consider 'teacher training,' 'physical facilities and teaching material' and 'supervision' as the most essential factors (6.6). Of these, 'physical facilities and teaching materials' did not really seem to be a pertinent factor in this study, because many schools which have a sufficient number of classrooms, still organise multigrade teaching according to pattern one (5.2.2, 6.2.1, 6.2.6, 6.2.7). Many

schools which have teaching materials do not use them in the classrooms (5.2.4, 6.3.2). The effectiveness of the 'supervision' system still needs time to evaluate (5.2.5). Taking this into account, 'teacher training' seems the most significant potential solution.

This sub-section has synthesised information on the practice of multigrade teaching in Nepal. In the visited schools and classrooms, the physical facilities were diverse. Consequently, five different patterns of multigrade class organisation were identified. The problems of multigrade teaching in the classrooms are related to class organisation and the use of teaching and learning time. One of the potential solutions is teacher training. The next sub-section synthesises the findings from the evaluation of Multigrade Teaching Training in Nepal.

### 11.1.3 Training for multigrade teaching

This sub-section synthesises findings from chapters Seven, Eight, Nine and Ten. It characterises Multigrade Teaching Training in Nepal as a system following the diffusion model. Through the evaluation of the training, it highlights its positive and negative features. Then it analyses the causes of the negative features, with special reference to the training curriculum, the cascade system, the selection of trainees, the process of training, as well as supervision after the training.

*Model of the training*

Looking at the training material, use of a cascade system and the involvement of teachers, this study concludes that Multigrade Teaching Training is oriented towards the diffusion of training contents. Notably there is no charismatic person in the training programme, and the providers and users of the training are not well linked. Indeed, training is diffused through a cascade system. There is a systematic structure with three layers of training. As a result, the training programme allows diffusion from one master trainer to 98 trained teachers in two resource centres of two districts (Chapters 7 and 8).

*Knowledge gained*

Multigrade Teaching Training certainly stimulated the trainees. Although the training curriculum was not new to some trainees, they still acquired new knowledge, and others recalled existing knowledge through the training (10.2). After the training more trainees put

*SLA, monitors and timetables* as skills important for multigrade teaching into the evaluation forms. Generally speaking, more multigrade teacher-trainees answered the question on multigrade teaching after the training. An important number of them acquired new knowledge or became more confident with their answers. Their answers converged.

*Competence gained*

Most trainees were able to use the knowledge newly acquired in the 'practice teaching' during the training (10.2.4). During practice teaching, most of the trainees were capable of organising two or more grades according to pattern three, differentiating *the main teaching class and the additional class* and providing *SLA* to keep all grades occupied simultaneously.

*Performance in the classroom*

In the five classrooms selected for observation after the training, only two trainees slightly increased the extent of their responsibility for multigrade teaching (10.3). Trainee Nuwakot-B3 moved up in the ladder of multigrade class organisation from 'pattern one' to 'pattern three.' Trainee Kavre-12 moved up from 'pattern two' to 'pattern two plus SLA.' There was not change for the other three trainees in multigrade class organisation. As a secondary effect of the training, however, all trainees were seduced by 'doing and learning' teaching. Natural materials, experimentation, wooden alphabet cards and alphabet pocket cards, as well as original handmade materials were observed being used in the classroom.

The discussion with trainers confirmed that especially *class organisation* and *the monitor system* improved (10.4). After the training, some teachers organised teaching according to *pattern three*, systematically gave instructions to the monitor and assigned more SLA. Especially in Kavre district, the *pattern two plus SLA* was observed.

*Negative features*

Although the training stimulated the trainees and influenced the classroom performance of some of them, its overall impact on multigrade teaching remains modest and superficial, both in practice teaching and in the classrooms. During practice teaching, most trainees were capable to act on what they had learned in the course, but their actions did not contain much meaning (10.2.4). In the actual classrooms observed, three trainees did not change their performance at all (10.3). The trainees in the school using pattern one could in fact not

implement innovations in the classroom without a structural change in multigrade teaching for the whole school.

The training barely influenced the negative perception of trainers and teacher-trainees with regard to multigrade teaching. The trainers continued to have a negative perception of multigrade teaching, and after the training were critical about the programme. They did not expect the training to improve teacher performance in multigrade schools (10.4). Although most trainees were satisfied with the training and valued the opportunity to receive it, many critical comments on multigrade teaching were made. They argued that multigrade teaching itself was problematic and that nothing would change after the training unless educational materials, improvement of school facilities and a sufficient number of teachers were provided (6.6).

There are several factors which explain why the training has only a slight impact on multigrade teaching. They are related to the training curriculum, the functioning of the cascade system, the selection of the trainees, the process of the training and supervision after the training.

*Training curriculum*

An ideal model of multigrade teaching at which the training aims is not clearly defined in the training curriculum (7.2). Only four concepts of multigrade teaching appear to underpin an implicit model of good practice. First, two or more grades should be differentiated into a main teaching class (T class) and an additional class (AM and AMT classes). This refers to *pattern three* of class organisation, identified in the classroom case studies (6.2.3). Second, it is suggested to provide *SLA* for AMT and AM classes, although the reasons for providing SLA and the amount of SLA to be set are not mentioned in the training material. Third, *a monitor* is to be selected from among the students of a grade group to take care of AM and AMT classes. The fourth concept is *group work*. The students should be divided into groups and a group leader should be selected in each group. However, these messages of the curriculum are ambiguous and incoherent, because of the different authors of the training package, training material and training handbook for trainers (7.2). Not surprisingly this leads to multiple interpretations and multiple misunderstandings by all the parties concerned.

*The cascade system*

The major achievement of cascading is teaching trainees the realisation of their responsibility for two grades. However, the trainers do not manage to transfer the main four messages –T and AMT classes, the provision of SLA, the monitor, and group work- from the training curriculum to the teacher-trainees. The four messages are supposed to be transferred by a cascade system from the central government, through Master Training of Trainers (MTOT) and District Training for Trainers (DTOT) to the Resource Centre (RC) level. However, they are being distorted right at the beginning of the cascade system. There is already a discrepancy between the model outlined in the training material and the model lesson of the trainer at MTOT. In the end only the *provision of SLA* and *the monitor* appear to have survived the cascade system. Some participants however did not acquire even the key concepts, because the trainers did not correct their errors. Others adopted them, but the quality and amount of SLA in their teaching were not appropriate. Just preparing SLA is not sufficient to keep the students occupied during the absence of the teacher from the classroom. Some SLA needed improvement to its quality. The monitor system as well as group work failed to function effectively.

Why were messages distorted in the cascade system? There appear to be problems of transmission of three different layers between MTOT/ DTOT on the one hand and Resource Centre Training (RCT) on the other.

First, there is a discrepancy between MTOT/DTOT and RCT as far as the qualifications and the teaching experience of the trainers are concerned (8.1). While all trainers above DTOT level have higher qualifications, none of them have teaching experience in primary schools. They know about multigrade teaching theoretically rather than through personal experience. By contrast, RCT trainers normally have teaching experience in multigrade primary schools. The three RCT trainers in the study for example have this teaching experience. At the same time, they are Resource Persons or headmasters and thus familiar with the reality in schools.

Second, there is a significant difference in the structure of the training between MTOT/DTOT and RCT levels, concerning duration, aims and coverage of the training material (8.3). Since the MTOT trainers have to restructure the training material and shorten a 10-day training programme to 1.5 days, the coverage of content is limited. DTOT trainers

work in the same way and duplicate the MTOT structure of training, just extending it from 1.5 to 4 days. They just extend the volume of training by 2.5 days. By contrast, the structure of RCT is completely different. Unlike MTOT/DTOT trainers, RCT trainers need to cover all topics of the training material, not only selected topics. Their aim is to finish the training material in ten days.

A third difference concerns the physical conditions of training. These conditions change between MTOT/DTOT and RCT. There were large tables for group work in MTOT which allowed to easily follow the instructions from the training material. The same kind of furniture allowed DTOT to follow the MTOT example (8.3). By contrast, tiny classrooms with inappropriate furniture made it difficult for RCT to follow the example of the upper levels (9.2). The classrooms were equipped with heavy, long wooden desks and long wooden benches arranged in rows and facing the blackboard. There was barely space to move the furniture in the classrooms.

*Selection of trainees*

The system according to which the teachers who receive training are chosen is not effective. There are in fact three types of teacher-trainees: teachers who are currently working in multigrade schools and will continue to teach multigrade classes after the training, teachers who used to work in multigrade schools, but are currently working in monograde schools, and teachers who are working in monograde schools and have never taught multigrade classes (7.4). Only approximately 30% of the trainees were current multigrade teachers, while 40% of the trainees were monograde teachers.

In principle all teachers have a negative perception of multigrade teaching (6.5.1). They think that multigrade teaching is a problem, rather than thinking that they have problems with multigrade teaching. Therefore, they think that the training – which obviously cannot change their teaching conditions from multigrade to monograde – is not useful (9.3.3). They insist on the allocation of a number of teachers corresponding to the number of grades, instead of the organisation of training courses for multigrade teaching.

Although all trainees have a negative perception of multigrade teaching, different types of trainees are different as far as their motivation and attitude towards the training are concerned

(9.1). Before the training, monograde teachers expected even less of it than multigrade teachers. They had a more passive attitude than multigrade and multigrade-experienced teachers. After the training, they showed a more positive attitude concerning the training because unlike multigrade teachers they go back to their monograde classrooms. Multigrade teachers were more realistic, and even more negative about multigrade teaching. Since many trainees are not interested in Multigrade Teaching Training, conducting the training is difficult (9.2).

*Training process*

The organisation of the training remained weak; it was rather conducted as 'something which has to be done within ten days.' As mentioned earlier, the training messages were ambiguous. The trainers were not well prepared for organising the training. The trainees on the other hand were not keen on undergoing training. The timing and conditions of RCT made conducting the training even more difficult. Because of the summer heat it was very hot. Classrooms as well were very small, dark and hot.

For the trainers the purpose of the training is mainly to run through the ten days of training material, rather than to transfer specific training messages to the trainees. During RCT sessions, the trainers only focus on going through the training material from the first to the last page. A typical training session consists of the following series of actions. The trainer or an active trainee read the introductory text. The trainer then assigns work on exercises and on filling in the blanks in the training material. The most active trainees complete these tasks and present their answers to the whole class. Other trainees simply fill in the blanks in their own training materials with the answers presented to them. Finally, the trainer concludes the section.

The purpose for the trainees seems to be filling in blanks in the training material rather than learning something (9.2). Unmotivated trainees try to make the training as short as possible. Indeed, the training ended up being shorter than the official five hours per day. This shortened time makes it difficult for the trainers to cover the whole training material. As the trainees tried to interrupt the training, the trainers, in order to keep them working, had to make new training sections immediately follow just concluded sections.

Although the trainees were divided into groups, group work and discussion were rare. The trainers tend to run things through quickly and sometimes omit topics. Sufficient explanation was often lacking, because explanations were limited to reading the text from the training material. When some trainees in their practice teaching did things wrong or differently, the trainers did not correct them. Observation forms were not used for practice teaching, because there were no copies of the form to distribute to the trainees.

*Supervision after the training*

As the training is in some sense a 'one-off event,' also because there is no official reflection on possible and desirable consequences, the training is not systematically supported afterwards (9.4). Although the training handbook instructs the trainer to make a supervision plan with the trainees, none of the trainers produced one. In Trisuli and Sunthan RCs, the Resource Persons of the RCs were not involved in the training. Therefore follow-up to the training could not be linked to the regular supervision tours of the Resource Persons.[1]

This sub-section has synthesised the evaluation of Multigrade Teaching Training in Nepal. It has highlighted the positive and negative findings of the training evaluation. The negative findings could be traced to several factors, including the training curriculum, the cascade system, the selection of trainees, the training process and supervision after the training.

The section as a whole has synthesised the macro- and micro-characteristics of multigrade teaching and Multigrade Teaching Training in Nepal. Despite the importance of multigrade teaching in both quantitative and qualitative terms, the government does not have a specific policy for multigrade teaching. In order to deal with the unintended situation where multigrade teaching exists, specific teacher training courses have been implemented. In practice however, multigrade teaching remains diversely organised, depending on the individual teachers. One of the necessities for efficient multigrade teaching is teacher training. However current teacher training is not really improving the practice of multigrade teaching in the classrooms – even though the training does influence trainees to some extent.

These findings are significant for three reasons. First, this study contributes to the existing

[1] However, this can not be generalised. Discussions with other Resource Persons seem to indicate that in some cases Resource Persons carry out the training and do follow-up visits (9.4).

scattered body of knowledge on multigrade teaching. It provides an addition in the form of a systematic study of policy, practice and training in Nepal. Second, detailed classroom observation has led to the identification of five patterns of class organisation. This provides a pragmatic typology, as well as a tool for understanding effective practice in classrooms, for both policy makers and researchers. Third, the analysis of the training adds to our understanding of cascade models used for training. The comprehensive evaluation has analysed the process of training from the central to RC level and, eventually, to the classrooms. Through a careful analysis of the training, discontinuities in the process have been identified, which allow recommendations for future improvement.

## 11.2 The place of the findings in the context of the international literature on multigrade teaching

The first section has synthesised the findings. This section will discuss the findings in the context of general literature on multigrade teaching. The first sub-section will discuss the practice of multigrade teaching in terms of macro- and micro-aspects. The second sub-section will discuss the effectiveness of teacher training, with special reference to the cascade model for in-service training.

### 11.2.1 The place of Nepalese multigrade teaching

*Policies and status of multigrade teaching*

Nepal is a country which has practical strategies, but no policies for multigrade teaching. Multigrade teaching is considered a temporary measure. This position is seen in 10 (including Nepal) of the 21 developing countries reviewed (Table 2-2, 2.2.2, 2.3).

In the 21 developing countries reviewed, multigrade schools are generally found in remote and sparsely populated areas (2.4.1, 2.4.3). In Nepal however, they are located in urban, as well as rural, disadvantaged areas (3.2.1, 5.2.1). Multigrade teaching is a feature in the majority of schools in Nepal.

*Practice of multigrade teaching*

Another outstanding characteristic of Nepalese multigrade teaching is the diversity of forms of multigrade teaching used. In the 21 developing countries reviewed, three patterns of multigrade class organisation have been identified. First, teachers teach all grades, as a whole class, together at the same time (pattern five in Nepal (2.5.4), Aikman and Pridmore, 2001, Lally, 1995, Little, 2001, Lungwangwa, 1989, Miguel and Basarga, 1997, Nielson et al., 1993, Yeerong, PROAP, 1989). Second, teachers teach different grade groups separately, teaching one class directly and assigning tasks to the others grades (pattern three in Nepal (2.5.5), Aikman, 1994, Birch and Lally, 1995, CERID, 1988, Lally, 1995, Nielson et al., 1993, Rowley, 1992, Thanh et al., 2000, Wright, 2000). Third, during a lesson period teachers make frequent short visits to each grade, effectively keeping them learning separately at the same time (pattern four in Nepal (2.5.6) Aikman and Pridmore, 2001, Tatto, 1999a, Thanh et al., 2000).

For Nepal this study has identified two additional patterns of multigrade class organisation. First, the teachers available in a school teach all five grades in turn (pattern one, 6.2.1). Second, the teachers teach one grade after another during one lesson, but do not teach simultaneously (pattern two, 6.2.2). In other words, multigrade teaching in Nepal is more diverse than what is described in the literature available on the practice of multigrade teaching, as summarised in the preceding paragraph.

### 11.2.2 The effectiveness of teacher training

*Strength and weakness of the evaluation model*

Teacher training has been evaluated on two levels of investigation. Vertically, the cascade system has been studied from the central to the Resource Centre (RC) level. Horizontally, three models of evaluation have been used: input, process and output evaluation (Table 4-1). Through the combination of these three models, teacher training has been comprehensively evaluated. It was especially important to include process evaluation (7.3.1; McCoy and Reynolds, 1998). This has provided deep insights into the transactions between trainers and trainees during the training. The problem with this has been however that process evaluation takes a great deal of time and patience (Dove, 1986, McCoy and Reynolds, 1998). Furthermore, combining the three models has taken over a year, from class observation

before the training to observation after the training. The time and patience required have limited the number of case studies.

*Effectiveness of in-service training*

In-service training is a common strategy for improving both knowledge and skills of not sufficiently qualified teachers (7.3.1; Biniakunu, 1982, Lockheed et al, 1991). However, its effectiveness has been criticised by a number of educational research and international assistance programmes (Commonwealth Secretariat, 1982, Craig et al., 1998, Dove, 1986, Guthrie, 1983, Kunje, 2002, Stuart and Lewin, 2002). Multigrade Teaching Training in this study however seems to be effective, because it succeeds in stimulating trainees and providing them with certain knowledge. It has also influenced classroom practice in two out of five cases (Chapter 10).

*Effectiveness of the cascade model*

On the other hand, the training can also be seen as ineffective in classrooms, because only two out of five trainees changed their style of multigrade teaching. This is caused by an ineffective implementation of the training programme. Vertically, training messages are meant to be transferred by a cascade system. In reality however they are distorted right from the beginning of the cascade, and there are further discontinuities on the way (8.2; 8.4). In theory, the cascade model is a cost-effective training distribution method with multiple effects (7.3.1; Dove, 1986, Department of Education and Science, UK, 1988, McDevitt, 1998). However it is also often criticised for its problems of effectiveness. Some researchers believe in fact that the cascade model is actually ineffective (McDevitt, 1998). Others argue that the effectiveness of the cascade model depends on the quality of planning and implementation, rather than on an inherent weakness of the model (Department of Education and Science, UK, 1988, Mezirow, 1991, Mpabulungi, 1999).

This study confirms the second analysis, because some key messages, including the provision of SLA, monitors and checking at the end of a lesson, survive right through the cascade system (8.4). Thus the cascade system functions for the transfer of some messages. On the other hand, there are also a number of failures in its implementation which cause ineffectiveness (Chapters 8, 9, 10). The trainees and their needs were not well defined (7.3.1; McDevitt, 1998). Clear training objectives, necessitating high quality, consistent training

material, were not set (Dove, 1986). The trainers were not carefully selected for their competence as trainers and their understanding of the knowledge and skills necessary in multigrade teaching. The role and function of each actor was not defined. Each stage of the training was not well structured. Ambiguity in the training objectives and material were not removed, creating a risk of personal interpretations. The trainers at the upper levels were not fully familiar with the practice of multigrade teaching, merely with its theory (Dove, 1986). The problem of commitment at the local level was not dealt with (Mpabulungi, 1999). The training process was not supervised. Thus proper training procedures and the accountability of the trainers were not assured (McDevitt, 1998). In principle however, the effectiveness of the cascade model can be increased by simply improving its implementation.

*Impact of the training in the classrooms*

On the horizontal level of analysis, the impact of the training in the classrooms remained modest and superficial. Some researchers argue that teacher training is essentially incapable of improving the quality of teachers (7.3.1; Craig et al., 1998, Dove, 1986). However, this study shows that the rather modest impact of the training results more from ineffective training design and implementation than from the concept of in-service training itself. The training did indeed produce some impact. Multigrade Teaching Training just lacks many key features of implementation.

First, the quality and relevance of the training curriculum are problematic. The training curriculum is overloaded (7.3.1; Dove, 1986). Some training contents are not relevant to local needs and conditions (Dove, 1986). The schools often have less equipment than the training curriculum assumes necessary for the application of new teaching techniques (Dove, 1986). Second, the trainees who need training are not well identified (Dove, 1986). Third, the training does not try to reduce the negative perception of multigrade teaching by the teacher-trainees. No change can take place when the users do not understand and do not want to adopt innovations (Bishop, 1986). Fourth, practice teaching was poorly designed and inadequately organised (Dove, 1986). The trainers did not correct trainee faults during practice teaching. Fifth, follow-up support after the training was not systematically integrated into the regular schedule of supervision. Discontinuous one-off training without follow-up including critical supervision is not effective (Lockheed et al, 1991, Andrews et al., 1990). The ineffectiveness of the implementation of the training is the most notable problem.

Consequently the next section will explore some potential recommendations for improving the effectiveness of the implementation of multigrade training.

## 11.3 Recommendations concerning innovations

Multigrade Teaching Training is conducted to improve the practice of multigrade teaching in Nepal. This study identifies the training as a system following the diffusion model of innovation and change and tries to evaluate the effectiveness of this model. This final section discusses possible future directions of the training, with regard to the current practice of multigrade teaching.

Multigrade Teaching Training uses only six master trainers, but reaches thousands of teachers in Nepal (Chapter 7). In Nuwakot and Kavre districts, it has been successful in providing some new knowledge and competence to many trainee-teachers. It has also had some impact on teaching practice in some classrooms (Chapter 10). Thus the diffusion model is far from useless. The current relative ineffectiveness can be improved on through changes to the current training structures. The first section provides recommendations for possible changes.

Although the diffusion model is functional, innovation and users need to be considered more fully. This study has revealed a wide diversity in the classroom practice of multigrade teaching in Nepal (Chapter 6). However, the training material does not take this into account and fails to propose an ideal model of multigrade teaching (Chapter 8). Therefore, the training should be further developed, based on scientific and systematic research, to better understand the current teaching and learning context of the trainee-teachers. The second section gives recommendations for further research.

As the training users are the most significant element of innovation, the trainees have to be taken into account. This study shows that Multigrade Teaching Training does not sufficiently consider the teaching and learning context of teacher-trainees. Thus a user-oriented model, such as the school-based model of Fullan (1985), could be a way to improve the relevance and effectiveness of the training.

However, a school-based model may not be a working solution in Nepal, because the teacher-trainees hold the very strong negative opinions on multigrade teaching. They do not see the necessity for changing this 'flawed' teaching system. They demand external solutions such as the allocation of more teachers to each school. In fact it is not only the teachers, but also the resource persons and trainers who are biased against multigrade teaching. The current strong negative perception of multigrade teaching has to be modified first. The third section makes recommendations for changing the negative perceptions of the trainees and suggests strategies for their empowerment.

This study would recommend that Nepal retains the current diffusion model, but adds elements which open up the model into two more directions. More reflection is needed on how to increase the relevance of training for teaching practice (innovation-orientation). Also empowerment of the teachers, to become more active users of the system, is recommended (user-orientation). The final section enumerates some key points for improving the current diffusion model and makes additional recommendations on the further development of and research on multigrade teaching.

### 11.3.1 Improvement of the diffusion-oriented model

*The cascade system*

In order to increase the effectiveness of teacher training, its implementation has to be improved. With regard to the cascade system, clear training messages, including a clear model of multigrade teaching, should be formulated. This should be accompanied by coherent training material, avoiding unnecessary confusion and minimising the potential diversity of personal interpretations. The trainers should be carefully selected. They should be competent as trainers and aware of the needs of multigrade teaching. The role and function of each actor should be defined. Each stage should be structured in the same way, having the same duration and physical conditions, so that the trainers at each level are able to exactly duplicate the upper training levels. The trainers at the upper levels should be fully familiar with the practice of multigrade teaching, not only its theory. The commitment at local level should be improved. The training process should be supervised to ensure proper training procedures and the accountability of the trainers.

*Improvement of the training*

On the horizontal level, the trainees who really need Multigrade Teaching Training have to be identified. Their needs, based on an analysis of teaching practice, should be well defined. The training should try to reduce the negative perception of multigrade teaching and, if necessary, the designation 'Multigrade Teaching Training' has to be abandoned. The training curriculum should be relevant to the local environment. It should be well balanced, with a feasible daily programme. Practice teaching should be adequately organised, with corrections and relevant feedback. The Resource Persons of the particular RCs where the training takes place should be used as trainers, in order to systematically link follow-up support after the training to their regular supervision.

*Awareness of the reality of multigrade teaching and combating negative perceptions*

Still, some more questions need to be asked: how can clear models of multigrade teaching be designed, when policy makers are unaware of the realities of multigrade teaching? How can capable trainers be selected, when few people are aware of multigrade teaching? How can the negative perception of multigrade teaching be reduced, when most actors at all levels hold negative opinions? How can commitment at the local level be promoted, when teachers and Resource Persons have very negative attitudes towards multigrade teaching? How can we expect the Resource Persons to do follow-up supervision to the training and support multigrade teaching, when their own opinions remain negative? In order to find answers to these questions, policy makers and researchers have to be aware of the reality of multigrade teaching and make efforts to combat negative perceptions at all levels.

*Combating negative perceptions*

Improving the negative image of the training programme should be feasible. For instance, the designation 'Multigrade Teaching Training' should be abandoned, because many teachers from rural areas are not motivated by the term 'multigrade teaching'. They feel it defines them as second-rate teachers, being sent to a second rate training course. The designation can be retained as a technical term, but should not be used as a title for the training. Alternative titles could be 'Class Organisation Training' or 'Student Management Training.'

As the degree of motivation, expectations and attitudes differ between multigrade and monograde teachers, Multigrade Teaching Training should be *limited to only multigrade*

*teachers*. The participation of monograde teachers in the same course creates an unnecessary social hierarchy. The perceived superiority of monograde teachers harms the effectiveness of the training. The contents of multigrade teaching should focus only on multigrade teaching, with special emphasis on increasing learning time of students through class organisation.

Alternatively, 'multigrade teaching' could be provided to *all primary school teachers* as part of a more comprehensive training curriculum. On-going Basic Primary Teacher Training (10 weeks) already has nine hours of 'multigrade teaching' for all teachers (3.4.1). This general training for all teachers, including monograde and multigrade teachers, could present multigrade teaching as an integral part of more general topics. This would not lead to unnecessary hierarchy. Training for multigrade teaching can be based for example on the existing Basic Primary Teacher Training. Meanwhile, further research should be conducted to guide the development of training for multigrade teaching. The next sub-section discusses a possible future agenda for research on multigrade teaching in Nepal, improving the understanding of the reality of multigrade teaching.

### 11.3.2 Further research towards increasing awareness of the realities of multigrade schools

*Collection of macro-data*

In order to develop clear models for multigrade teaching, policy makers and related actors, including the trainers, must understand the real situation of multigrade teaching. In order to gain a macro-perspective, the extent and distribution of multigrade teaching should be studied. In order to take practical decisions and formulate policy commitments, the significance of multigrade teaching should be faced and recognised. The number of grades and teachers, allowing the calculation of the extent of multigrade teaching, were easily available in Nuwakot and Kavre districts. It would not be difficult to collect the data and make the calculations to estimate national figures for the extent of multigrade teaching, allowing decisions and systematic commitments.

*Necessity for qualitative research*

School- and classroom-based qualitative research on existing practice is indispensable. It will help to inform the policy makers at the upper levels who tend to be inexperienced in multigrade teaching and are unaware of current practice. There are four suggestions for an

agenda of qualitative research. First, in order to formulate good models for multigrade teaching, which are acceptable and possible to realise in the current situation of multigrade schools and classrooms which are characterised by a wide variety of conditions, a classification of multigrade class organisation is necessary. Such a classification was proposed in chapter Six, and this could be extended by other researchers. For baseline information, the existing patterns of multigrade class organisation should be explored. This study conducted in two districts of the Hill region has classified the practice of multigrade teaching into five patterns. In different locations such as the Terai, Mountain, East, West and other regions, different additional patterns may be discovered.

Second, classroom observation undertaken by a team of researchers would be essential to understand several dimensions of multigrade teaching. In Nepal, multigrade teaching takes place in not just as single classroom. When a researcher follows the teacher to another classroom he cannot observe the students staying behind. Therefore, it cannot be observed how these remaining students use their time. It is important to collectively observe multigrade teaching and learning during a lesson period. Only this allows to measure time on task in multigrade teaching and to determine an adequate amount of and contents for SLA.

Third, participant observation by a multigrade teacher may lead to the discovery of practical problems and help to establish the needs of multigrade teaching from the point of view of an insider. At the moment multigrade teachers do not feel responsible, because they consider that the problems of multigrade teaching are caused by external factors such as insufficient teacher allocation and inadequate facilities. Getting useful information on multigrade teaching from insiders, i.e. multigrade teachers, is therefore quite difficult. Trial and error methods used by researcher-multigrade teachers – for example the setting of different types of SLA or the use of different patterns of class organisation – will help to determine effective methods which can subsequently be used in training for multigrade teaching.

Fourth, action research, supported by strongly committed Nepalese researchers – if possible from the areas where research is conducted – could have a potential for reducing the negative perception of multigrade teaching and help promoting commitment at the local level, including teachers and resource persons.

Appendix 1

Map showing the place of the case study districts

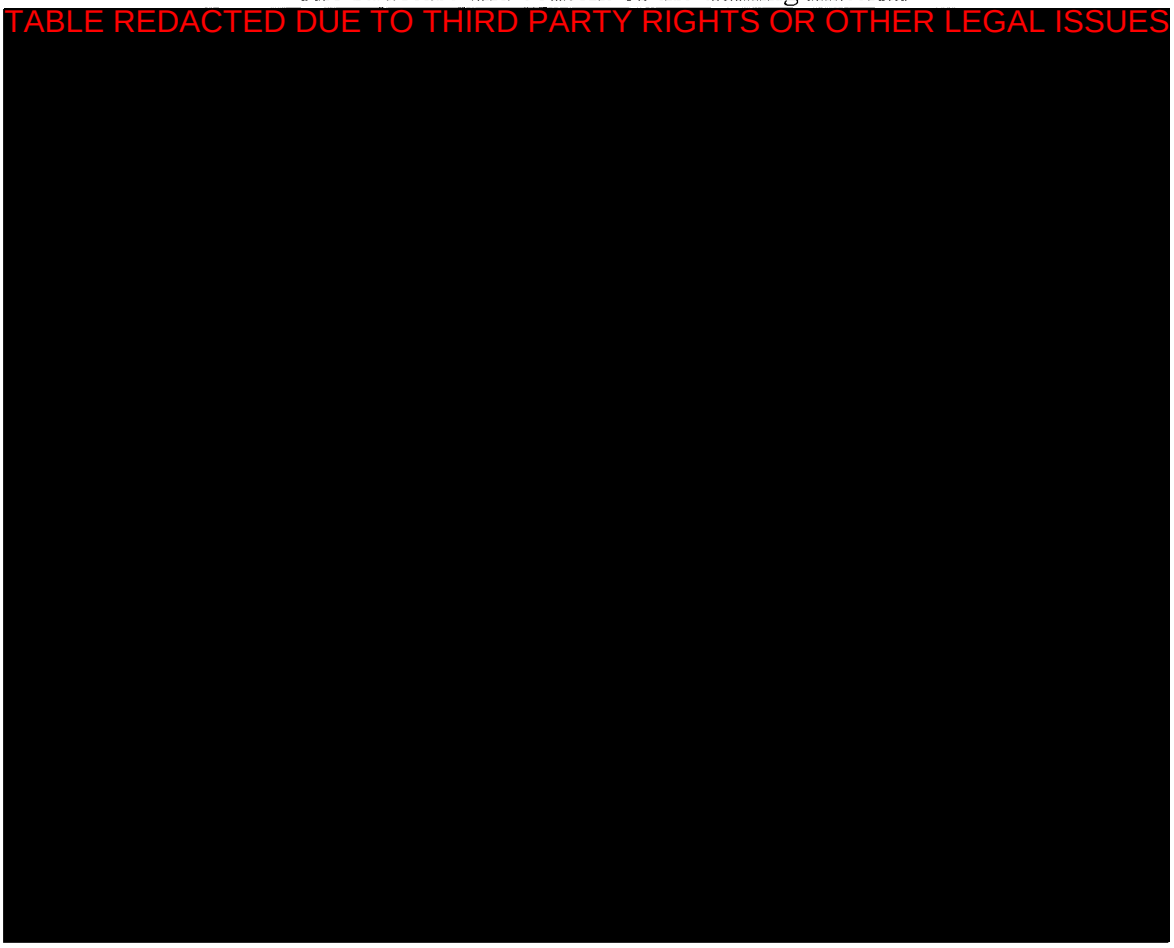

Source: HMG and UNICEF (1997)

Appendix 2

Description of the training material for the trainees (PTTU, 1998a)

The structure and content of the training material

TABLE REDACTED DUE TO THIRD PARTY RIGHTS OR OTHER LEGAL ISSUES



The content of the training material is structured for ten sections, each of which is planned for coverage in one day.

The first four sections are more theoretical than the last six sections. In the first section, the definition, the situation and the reasons for multigrade teaching are covered. According to the material, there are three types of teaching in Nepal. They are grade teaching, subject teaching and multigrade teaching. Grade teaching is described as when one teacher teaches all subjects in a particular grade through a whole year (monograde). Subject teaching is described as when the teacher teaches only particular subjects taught separately from each other (monograde). Multigrade teaching is described as when one teacher teaches either all subjects or some particular subjects to two or more grade groups simultaneously. After the

definition of multigrade teaching, trainees are expected to discuss how they conduct multigrade teaching in their own schools and what their problems are. Then the discussion is shifted to why multigrade teaching should be conducted in Nepal.

In the second section, a timetable, material on classroom and student management, evaluation, examination, and students' records are included. Constructing a timetable is a major issue in the training. The basic programmes are how to organise several grades in the same time, a lesson and who teaches them. When two or more grades are taught by one teacher, one grade should be the main class (T class) and the others should be self-learning classes with a Self-Learning Activity (SLA) controlled by a selected monitor (AM or AMT classes). Group work is encouraged. The students should be divided into groups and a leader should be selected in each group.

In the third section, material on teaching planning, multigrade teaching methods, and creative activities is included. Making annual, monthly, weekly and daily lesson plans is suggested. This section concentrates how to manage two or more grades with attention to the grade whose teacher is physically absent. Once again, the importance of providing SLA and appointing the monitor is stressed.

In the fourth section, material on teaching resources and skills required for teaching is included. This section deals with how to make effective use of a blackboard, textbooks, pictures, reference books, games, songs, SLA and homework.

The fifth to ninth sections are more practical. The fifth and sixth sections specially emphasise SLA. The seventh, eighth, and ninth sections relate to the demonstration class and teaching practice. The trainer demonstrates a model multigrade lesson and then the trainees run a practice lesson. In order for each trainee to observe the demonstration and teaching practice of the others, an observation form is introduced in the seventh section. The observation form is comprehensive, including a timetable to indicate the place of the demonstration and teaching practice, grades, subjects, lesson topics and targets for the teacher, activities and achievements of the lesson, student learning rates and seven categories of suggestions. The tenth section is the concluding review of what has been learnt during the training.

Appendix 3

Description of the training handbook for the trainer (PTTU, 1998b)

The material for the trainees is accompanied by a handbook for the trainer. The handbook has two functions. One is to guide the trainer with instructions on how to conduct the training. Another is to provide answer keys for the exercise activities and blanks of the training material. The structure of the handbook follows the sections of the training material.

There are guidelines for conducting the training. For example, in the case of Activity 1 in the training material, in the first section, clear instruction for the trainee is given. In the handbook, instructions for the trainer are included. It is suggested that the trainer should divide the trainees into groups for discussion and completion of the blanks for the exercise activities, and should then ask the group leader to present the answers. If there are any mistakes, the trainer should correct them (PTTU, 1998b: 6). For Activity 2 in the first section, the trainer is instructed to identify and acknowledge the individual situation of trainees rather than proposing some ideal model of multigrade teaching. As the ideas and experience of multigrade teaching of the trainees vary, it is suggested that the trainer should take care to treat all thoughts and ideas equally (PTTU, 1998b: 7).

There is no additional explanation of any particular policy or ideal model of multigrade teaching for the trainer to demonstrate. There is also no supplementary explication of T, AM, and AMT classes anywhere in the handbook. The first section concludes that the methods of multigrade teaching are different according to the condition of each school (PTTU, 1998b: 9). The handbook seems designed to facilitate and stimulate the trainees rather than to provide new ideas on multigrade teaching.

As the style of the training material shifts from the fifth section, the style of the handbook also shifts from this section. In the fifth section, there are 14 bullet points to prepare SLA (PTTU, 1998b: 32-33). In the training material, clear instruction for the trainees are not found. By contrast, there are clear instructions for the trainer in the handbook.

Another shift from the fifth section is that the trainer is encouraged to hold the training in the school, to ensure that the practice is in a real setting. Therefore, the instructions are designed

for practice in a school. At the same time, the handbook mentions possible problems, as follows (PTTU, 1998b: 35):

> Possible problems: During the training period, the school may be closed. If the school is on long vacation, students cannot be found. In addition, appropriate classrooms for the required students may not be available, even if the school is open. Moreover, what will be done the students during the demonstration class?

However, no solution is offered for these problems.

Additionally, two significant instructions for the trainer, which are not included in the training material, are included in the handbook. One is about the observation form. The handbook does not explain the form sufficiently. However, it clearly instructs the trainer to provide a clear explication of the observation form, and to make the trainees fill up the form when they observe others.

The second instruction is about supervision after the training. The tenth section of the handbook requires the trainer to make a plan with the trainees, to supervise their performance after the training (PTTU, 1998b; 37-38). The plan should include the total number of schools to be visited, the duration of the visits, the targets the training to be achieved, and the usage of the skills introduced by the training. It is further suggested that the trainer should complete the observation form during the school visits and give feedback to the trainees orally or in a written form. If necessary, the trainer should demonstrate a model lesson in the trainee's school, or require the trainee to observe a multigrade classroom in the nearest school.

Appendix 4

Questionnaire distributed at the beginning of training

## Questionnaire on Multigrade Teaching

This questionnaire will be used for the academic purpose only. Please check or circle on propitiate items or write your answers in the blanks.

1. Are you a head teacher of your school? YES / NO
2. Are you female or male? Female/ male
3. Have you had the multigrade teacher training before? YES /NO
4. How many years have you been a teacher? _____years
5. Have you taught more than two classes at the same time? YES/ NO
6. If you have (yes), how many years have you been teaching more than two classes?__years
7. Does your school have a nursery class? YES/ NO
8. How many classes are there in your school? __from ___upto
9. How many teachers are there in the primary level (from class 1 to class 5) of your school?
_____people (janna)
10. How many classrooms are there in the primary level of your school?
_____pieces (wota)
11. When you teach more than two grades at the same time, do you teach each class in the separate room? YES/ NO

12. How do you feel when you teach more than two classes at the same time?
(12a) Easier than single class teaching
(12b) no difference from single classes
(12c) more difficult than single class teaching

13. Do you have any problem when you teach more than two classes at the same time?
YES/NO

14. If you answered no.11 'yes', what are the problems? (chose as many as you like)
(14a) I do not know how to teach effectively

(14b) I do not know how to manage students in general way

(14c) I do not have enough time to teach the subject contents for more than two classes

(14d) I cannot manage more than two classes at the same time

(14e) I do not know how to produce (prepare) self-learning materials

(14f) The students cannot work alone during when I am not in the classroom

(14g) The students I have left behind in the other room begin to be noisy and restless

(14h) I cannot appoint a group leader

(14i) The monitors cannot help as I expected

(14j) I cannot supervise (inspect) the students' activities myself from time to time

(14k) The students cannot learn and get knowledge as I expect

(14l) others (please specify and write as many as you wish)

15. Why are you taking this multigrade teaching training, (but not another training)?

(15a) I feel need to improve the method of (my conducting) multigrade teaching.

(15b) I wanted to take another training but there was no other training available.

(15c) I was told to take this training by a Resource Person or a Headmaster.

(15d) others (please specify)

16. What do you expect to learn on this multigrade teaching training? (chose as many as you like)

(16a) skills to prepare the teaching plan for the lessons

(16b) skills to make the time table

(16c) student management skills

(16d) skills to manage more than two classes at the same time

(16e) skills to control students of other classes when the teacher is not in the classroom

(16f) how to evaluate students

(16g) how to take daily attendance of students

(16h) how to start classes

(16i) how to use the blackboard

(16j) how to use textbooks

(16k) skills to make songs and games

(16l) how to introduce experimental learning to the lessons

(16m) subject teaching skills

(16n) skills to make materials for self-learning activities

(16o) skills to use materials for self-learning activities

(16p) others (please specify and write as many as you wish)

17. Do you think that making the teaching plan helps your teaching? YES/ NO

18. Do you prepare (make) the teaching plan for the lessons?

YES/ NO

19. If you do (yes), what kind of plans? (chose as many as appropriate)

(19a) annual plans

(19b) monthly plans

(19c) weekly plans

(19d) daily plans

20. If you do not (no), why not?

(20a) the teaching plan is not useful at all

(20b) I do not know how to make them

(20c) plans are useful but no time to make the plan

(20d) others (please specify)

21. What does 'multigrade teaching' mean for you? Please write all things that you know about multigrade teaching.

22. How do you currently manage more than two classes at the same time in your school?

23. What do we need in order to improve multigrade teaching? Please write your suggestions after your experience of multigrade teaching.

Thank you very much. I appreciate your cooperation very much.

| | |
|---|---|
| विद्यालयको नाम : _____<br>ठेगाना : _____ | तपाईंको नाम (ऐच्छिक):<br>_____ |
| स्रोतकेन्द्रको नाम : _____<br>(RC) | मिति: |

## बहुकक्षा शिक्षणसम्बन्धी प्रश्नावली

यो प्रश्नावली पठन-पाठन र तत्सम्बन्धी अन्य प्रयोजनका निम्ति मात्र प्रयोग गरिनेछ। कृपया आफ्नो हिसाबले ठीक-ठीक कुरामा रेजा [✓] चिन्ह लगाउनुहोस् अथवा आफ्नो उत्तर खाली ठाउँमा लेख्नुहोस्।

१. के तपाई आफ्नो विद्यालयको प्रधानाध्यापक हुनुहुन्छ ?

छ ☐ छैन ☐

२. तपाईं महिला हुनुहुन्छ कि पुरुष ?

महिला ☐ पुरुष ☐

३. यसभन्दा अघि बहुकक्षा शिक्षक तालीम लिनु भएको छ ?

छ ☐ छैन ☐

४. कति वर्षदेखि शिक्षण गर्दै हुनुहुन्छ ?

_____ वर्षदेखि

५. के तपाईले उही समयमा दुईभन्दा बढी कक्षाहरुमा पढाउनु भएको छ ?

छ ☐ छैन ☐

६. छ, भने, कति वर्ष गर्नु भएको छ ?

_____वर्ष

७. तपाईको विद्यालयमा नर्सरी कक्षा छ ?

छ ☐ छैन ☐

८. तपाईको विद्यालयमा कतिवटा शिक्षण कक्षाहरु छन् ?

कक्षा_____ देखि कक्षा_____ सम्म गरी _____ वटा

९. तपाईको विद्यालयको प्राथमिक तहमा (कक्षा १ देखि कक्षा ५ सम्म गरी) कतिजना शिक्षकहरू छन्

_____जना

१०. प्राथमिक तहका लागि कतिवटा कक्षाहरू छन् ?

_____वटा

११. एकै समयमा दुईभन्दा बढी कक्षाहरूलाई पढाउनु पर्दा के तपाईं प्रत्येक कक्षाका लागि छुट्टाछुट्टै कोठा प्रयोग गर्नुहुन्छ ?

गर्छु ☐ गर्दिनँ ☐

१२ बहुकक्षा शिक्षण गर्दा बहुकक्षा शिक्षण तपाईलाई कस्तो लाग्दछ ?

☐ एउटै कक्षालाई पढाउनुभन्दा बढी सजिलो

☐ फरक लाग्दैन

☐ एउटै कक्षालाई पढाउनुभन्दा कठिन

१३. उही समयमा दुईभन्दा बढी कक्षाहरुमा पढाउँदा समस्या आइऱ्यो कि ?

आइपरे ☐ आइपरेनन् ☐

१४. आइपरेका भए कुन-कुन समस्या आइपरे ? (जतिवटा छान्नुभए पनि हुन्छ)

(क) ☐ आफ्नो शिक्षणलाई कसरी प्रभावकारी गराउने ? मलाई थाहा भएन ।

(ख) ☐ साधारण हिसाबबाट विद्यार्थी व्यवस्थापन कसरी गर्ने भन्ने मलाई थाहा भएन ।

(ग) ☐ दुईवटाभन्दा बढी कक्षालाई विषयगत पाठ्यवस्तु पढाउन पर्याप्त समय पाउँदिन ।

(घ) ☐ एकै समयमा दुईभन्दा बढी कक्षाहरूको व्यवस्थापन गर्न सक्दिनँ ।

(ङ) ☐ स्वयंसिकाई सामग्रीहरु तयार गर्न सक्दिन ।

(च) ☐ आफू कक्षाकोठाभित्र उपस्थित नहुँदा विद्यार्थीहरू आफ्नै भरमा कार्य गर्न सक्दैनन् ।

(छ) ☐ मैले अघिल्लो कक्षामा छोडेर आएका विद्यार्थीहरु हल्ला र चकचक गर्न थाल्दछन् ।

(ज) ☐ म समूह नेता नियुक्ति गर्न सक्दिन ।

(झ) ☐ मनिटरहरुले धेरै मद्दत गर्न सक्दैनन् ।

(ञ) ☐ म आफै बेलाबेलामा विद्यार्थीहरुका क्रियाकलापहरु निरीक्षण गर्न सक्दिन ।

(ट) ☐ विद्यार्थीहरू मैले अपेक्षा गरेजति सिक्न र ज्ञान हासिल गर्न सक्दैनन् ।

(ठ) अन्य (किटान गरेर लेख्नुहोस्, जतिवटा लेख्नुभए पनि हुन्छ)

१५. यो बहुकक्षा शिक्षण तालीम किन लिँदै हुनुहुन्छ ?

(क) ☐ मलाई आफ्नो बहुकक्षा शिक्षण सञ्चालनलाई सुधार्नु जरुरी भयो ।

(ख) ☐ अर्के तालीम लिन चाहन्थे तर अर्को कुनै तालीम उपलब्ध थिएन ।

(ग) ☐ स्रोतव्यक्ति वा प्रधानाध्यापकले मलाई यो बहुकक्षा शिक्षण शिक्षक तालीम लिन भन्नभयो ।

(घ) अन्य (किटेर भन्नु होस्)

१६. यो बहुकक्षा शिक्षण तालीमबाट तपाईं के-के कुरा सिक्ने अपेक्षा राख्नुहुन्छ? (जतिवटा छान्नुभए पनि हुन्छ)

(क) ☐ पाठहरू पढाउनका लागि शिक्षण योजना तयार गर्न चाहिने सीपहरू

(ख) ☐ समय तालिका बनाउने सीपहरू

(ग) ☐ विद्यार्थी व्यवस्थापन सीपहरू

(घ) ☐ एकै समयमा दुईभन्दा बढी कक्षाहरू व्यवस्थापन गर्न आवश्यक पर्ने सीपहरू

(ङ) ☐ अर्को कक्षामा शिक्षक नहुँदा त्यस कक्षाका विद्यार्थीहरूलाई नियन्त्रणमा राख्न चाहिने सीपहरू

(च) ☐ विद्यार्थीहरूको मूल्याङ्कन गर्ने तरीका

(छ) ☐ विद्यार्थीहरूको दैनिक हाजिरी लिने तरीका

(ज) ☐ कक्षा आरम्भ गर्ने तरीका

(झ) ☐ कालोपाटी प्रयोग गर्ने तरीका

(ञ) ☐ पाठ्यपुस्तकहरू प्रयोग गर्ने तरीका

(ट) ☐ विद्यार्थीहरूका लागि गीत र खेलहरू रचना गर्ने सीपहरू

(ठ) ☐ कृयाकलाप गरेर सिक्ने (Learning by doing)

(ड) ☐ विषय शिक्षणका सीपहरू

(ढ) ☐ स्वयंसिकाइका क्रियाकलापहरूका लागि आवश्यक सामग्रीहरू तयार गर्ने सीपहरू

(ण) ☐ स्वयंसिकाइका क्रियाकलापहरूका लागि तयार पारिएका सामग्रीहरू प्रयोग गर्ने सीपहरू

(त) अन्य (कितानी गरेर जतिवटा लेख्नुभए पनि हुन्छ)

१७. के तपाईं शिक्षण योजनाको निर्माणले बहुकक्षा शिक्षणलाई मद्दत पुऱ्याउँदछ भन्ने ठान्नुहुन्छ ?

ठान्छु ☐ ठान्दैन ☐

१८. के तपाईं पाठहरुका लागि पाठ्योजनाहरु तयार गर्नुहुन्छ ?

गर्दछु ☐ गर्दैन ☐

१९. गर्नुहुन्छ भने, के-कस्ता किसिमका (तपाईंको आफ्नो स्थितिसित मिल्ने जतिवटा छान्नु भए पनि हुन्छ ।

(क) ☐ वार्षिक योजना

(ख) ☐ मासिक योजना

(ग) ☐ साप्ताहि योजना

(घ) ☐ दैनिक योजना

२०. गर्नुहुन्न भने, किन होला ?

(क) ☐ शिक्षण योजना उपयोगी हुँदै हुँदैन ।

(ख) ☐ मलाई शिक्षण योजना बनाउनै आउँदैन ।

(ग) ☐ शिक्षण योजनाहरु उपयोगी हुन्छ तर बनाउन समय नै पाईँदैन ।

(घ) अन्य (किटेर भन्नु होस्)

२१. "बहुकक्षा शिक्षण" भन्नाले तपाईं खास के बुझ्नुहुन्छ ? बहुकक्षा शिक्षणबारे आफूलाई थाहा भएजति कुरा लेख्नुहोस् ।

२२. आजभोलि तपाई उही समयमा दुईभन्दा बढी कक्षाहरुको व्यवस्थापन कसरी गर्नु हुन्छ ?

२३. बहुकक्षा शिक्षणमा सुधार ल्याउन हामीले के-के गर्नुपर्दछ ? बहुकक्षा शिक्षण अनुभवका आधारमा आफ्नो मन्तव्य प्रस्तुत गर्नुहोस् ।

तपाईलाई धेरै-धेरै धन्यवाद । म तपाईको सहयोगको सराहना गर्दछु ।

Appendix 5

Evaluation form distributed at the end of training

## Evaluation Form on Multigrade Teaching Training

This questionnaire will be used for the academic purpose only. Please check or circle on propitiate items or write your answers in the blank.

1. Are you a head teacher of your school? YES / NO
2. Are you female or male? Female/ male
3. Have you had the multigrade teacher training before? YES /NO
4. Have you taught more than two classes at the same time? YES/ NO
5. How did you find this overall multigrade teaching training?

A: Excellent, B: Good, C: Fair, D: Bad, E: Very bad

6. Which of this multigrade teaching training contents did you find useful for the multigrade teaching in your class? (chose one of A: very useful, B: useful, C: a little useful, D: not so much useful, E: useless)

| | | | | | |
|---|---|---|---|---|---|
| (6a) Skills to prepare the teaching plan | A | B | C | D | E |
| (6b) Skills to make the time table | A | B | C | D | E |
| (6c) Student management skills | A | B | C | D | E |
| (6d) Skills to manage two classes at the same time | A | B | C | D | E |
| (6e) Skills to control students of other classes | A | B | C | D | E |
| (6f) How to evaluate students | A | B | C | D | E |
| (6g) How to take daily attendance of students | A | B | C | D | E |
| (6h) How to start classes | A | B | C | D | E |
| (6i) How to use the blackboard | A | B | C | D | E |
| (6j) How to use textbooks | A | B | C | D | E |
| (6k) Skills to make songs and games | A | B | C | D | E |
| (6l) How to introduce experimental learning | A | B | C | D | E |
| (6m)Subject teaching skills | A | B | C | D | E |
| (6n) How to make materials for SLA | A | B | C | D | E |
| (6o) Skills to use materials for SLA | A | B | C | D | E |

(6p) Other useful contents (please specify and write as many as you wish)

7. Did the training help to solve your problems? (Chose one of A: yes, B: no, C: I do not know)

| | | | |
|---|---|---|---|
| (7a) How to teach effectively | A | B | C |
| (7b) How to manage students in general | A | B | C |
| (7c) Not enough time to teach | A | B | C |
| (7d) To manage two classes at the same time | A | B | C |
| (7e) To prepare self-learning materials | A | B | C |
| (7f) The students cannot work alone | A | B | C |
| (7g) The students begin to be noisy | A | B | C |
| (7h) I cannot appoint a group leader | A | B | C |
| (7i) The monitors can help only some extent | A | B | C |
| (7j) Inspection of the students' activities myself | A | B | C |
| (7k) The students cannot learn as I expect | A | B | C |

(7l) Others (please specify and write as many as you wish)

8. Which of the training contents you have learned in this training are you going to adopt in your classrooms?

(8a) skills to prepare the teaching plan

(8b) skills to make the time table

(8c) student management skills

(8d) skills to manage two classes at the same time

(8e) skills to control students of other classes

(8f) how to evaluate students

(8g) how to take daily attendance of students

(8h) how to start classes

(8i) how to use the blackboard

(8j) how to use textbooks

(8k) skills to make songs and games

(8l) how to introduce experimental learning

(8m) subject teaching skills

(8n) how to make materials for SLA

(8o) skills to use materials for SLA

(8p) any comments (please specify and write as many as you wish)

9. What was the most impressive thing for you in this training?

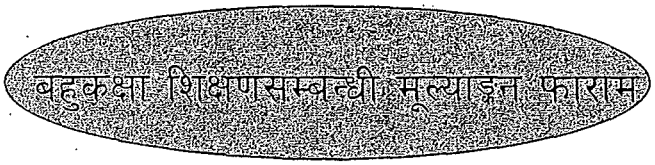
10. Why?

11. How will you manage more than two classes at the same time in your school?

12. If you have any comments or suggestions for the improvement of this training, please write.

Thank you very much. I appreciate your cooperation very much.

| | |
|---|---|
| विद्यालयको नाम : _____<br>ठेगाना : _____ | तपाईंको नाम (ऐच्छिक):<br>_____ |
| स्रोतकेन्द्रको नाम (RC): _____ | मिति: |




यो प्रश्नावली पठन-पाठन र तत्सम्बन्धी अन्य प्रयोजनका निम्ति मात्र प्रयोग गरिनेछ। कृपया आफ्नो हिसाबले ठीक-ठीक कुरामा रेजा [✓] चिन्ह लगाउनुहोस् अथवा आफ्नो उत्तर खाली ठाउँमा लेख्नुहोस् ।

१. के तपाई आफ्नो विद्यालयको प्रधानाध्यापक हुनुहुन्छ ?

छु ☐ छैन ☐

२. तपाईं महिला हुनुहुन्छ कि पुरुष ?

महिला ☐ पुरुष ☐

३. यसभन्दा अघि बहुकक्षा शिक्षक तालीम लिनु भएको छ ?

छ ☐ छैन ☐

४. के तपाँईले उही समयमा दुईभन्दा बढी कक्षाहरुमा पढाउनु भएको छ ?

छ ☐ छैन ☐

५. यो बहुकक्षा शिक्षण तालीमलाई जम्माजम्मी तपाईंले कस्तो पाउनु भयो?

(A) साह्रो राम्रो ☐ (B) राम्रो ☐ (C) ठीकै ☐

(D) नराम्रो ☐ (E) साह्रै नराम्रो ☐

६. यो बहुकक्षा शिक्षण तालीमका बिषयवस्तुमध्ये कुनचाहिँ आफ्नो कक्षामा बहुकक्षा शिक्षणका हिसाबले उपयोगी लाग्यो?

(एउटा छान्नु होस्: (A) धेरै उपयोगी, (B) उपयोगी, (C) अलिकति उपयोगी, (D) त्यति उपयोगी भएन, (E) उपयोगी नै भएन ।

| | | A | B | C | D | E |
|---|---|---|---|---|---|---|
| (क) | पाठहरू पढाउनका लागि शिक्षण योजना तयार गर्न चाहिने सीपहरू | | | | | |
| (ख) | समय तालिका बनाउने सीपहरू | | | | | |
| (ग) | विद्यार्थी व्यवस्थापन सीपहरू | | | | | |
| (घ) | एकै समयमा दुईभन्दा बढी कक्षाहरू व्यवस्थापन गर्न आवश्यक पर्ने सीपहरू | | | | | |
| (ङ) | अर्को कक्षामा शिक्षक नहुँदा त्यस कक्षाका विद्यार्थीहरूलाई नियन्त्रणमा राख्न चाहिने सीपहरू | | | | | |
| (च) | विद्यार्थीहरूको मूल्याङ्कन गर्ने तरीका | | | | | |
| (छ) | विद्यार्थीहरूको दैनिक हाजिरी लिने तरीका | | | | | |
| (ज) | कक्षा आरम्भ गर्ने तरीका | | | | | |
| (झ) | कालोपाटी प्रयोग गर्ने तरीका | | | | | |
| (ञ) | पाठ्यपुस्तकहरू प्रयोग गर्ने तरीका | | | | | |
| (ट) | विद्यार्थीहरूका लागि गीत र खेलहरू रचना गर्ने सीपहरू | | | | | |
| (ठ) | कृयाकलाप गरेर सिक्ने (Learning by doing) | | | | | |
| (ड) | विषय शिक्षणका सीपहरू | | | | | |
| (ढ) | स्वयंसिकाइका क्रियाकलापहरूका लागि आवश्यक सामग्रीहरू तयार गर्ने सीपहरू | | | | | |
| (ण) | स्वयंसिकाइका क्रियाकलापहरूका लागि तयार पारिएका सामग्रीहरू प्रयोग गर्ने सीपहरू | | | | | |

अन्य उपयोगी विषयवस्तुहरु (किटेर लेख्नुहोस्, जतिवटा लेख्नुभए पनि हुन्छ)

७. तालीमले तल दिइएका समस्याहरुको समाधान गर्नमा मद्दत गऱ्यो कि गरेन?

| | समस्याहरु | गऱ्यो | गरेन | थाहा छैन |
|---|---|---|---|---|
| (क) | प्रभावकारी शिक्षणमा | | | |
| (ख) | साधारण हिसाबबाट विद्यार्थी व्यवस्थापन गर्नमा | | | |
| (ग) | दुईवटाभन्दा बढी कक्षालाई समय मिलाउनुमा | | | |
| (घ) | एकै समयमा दुईभन्दा बढी कक्षाहरूको व्यवस्थापन गर्नुमा | | | |
| (ङ) | स्वयंसिकाई सामग्रीहरु तयार गर्नमा | | | |
| (च) | आफू कक्षाकोठाभित्र उपस्थित नहुँदा विद्यार्थीहरू आफ्नै भरमा कार्य गर्न सक्नेमा | | | |
| (छ) | अघिल्लो कक्षामा छोडेर आएका विद्यार्थीहरु हल्ला र चकचक नगराउनुमा | | | |
| (ज) | समूह नेता नियुक्ति गर्नुमा | | | |
| (झ) | मनिटरहरुले मद्दत गराउनेमा | | | |
| (ञ) | विद्यार्थीहरुका क्रियाकलापहरु निरीक्षण गर्नेमा | | | |
| (ट) | विद्यार्थीहरू अपेक्षित रुपमा सिक्न र ज्ञान हासिल गराउनुमा | | | |
| (ठ) | अन्य (किटान गरेर लेख्नुहोस्, जतिवटा लेख्नु भए पनि हुन्छ) | | | |
| | | | | |
| | | | | |
| | | | | |

८. यो बहुकक्षा शिक्षण तालीमबाट सिकेका कुन कुन कुरा तपाई आफ्नो कक्षाकोठामा प्रयोग गर्न जाँदै हुनुहुन्छ?

| | | |
|---|---|---|
| (क) | पाठहरू पढाउनका लागि शिक्षण योजना तयार गर्न चाहिने सीपहरू | |
| (ख) | समय तालिका बनाउने सीपहरू | |
| (ग) | विद्यार्थी व्यवस्थापन सीपहरू | |
| (घ) | एकै समयमा दुई वा दुईभन्दा बढी कक्षाहरू शिक्षण गर्ने सीपहरू | |
| (ङ) | अर्को कक्षामा शिक्षक नहुँदा त्यस कक्षाका विद्यार्थीहरूलाई नियन्त्रणमा राख्न चाहिने सीपहरू | |
| (च) | विद्यार्थीहरूको मूल्याङ्कन गर्ने तरीका | |
| (छ) | विद्यार्थीहरूको दैनिक हाजिरी लिने तरीका | |
| (ज) | कक्षा सुरु गर्ने तरीका | |
| (झ) | कालोपाटी प्रयोग गर्ने तरीका | |
| (ञ) | पाठ्यपुस्तकहरू प्रयोग गर्ने तरीका | |
| (ट) | विद्यार्थीहरूका लागि गीत र खेलहरू रचना गर्ने सीपहरू | |
| (ठ) | वतावरण प्रयोग [कृयाकलाप गरेर सिक्ने (Learning by doing)] | |
| (ड) | विषयवस्तुको शिक्षण प्रविधि | |
| (ढ) | स्वयं-सिकाइका क्रियाकलापहरूका (SLA) लागि आवश्यक सामग्रीहरू तयार गर्ने सीपहरू | |
| (ण) | स्वयं-सिकाइका क्रियाकलापहरूका (SLA) लागि तयार पारिएका सामग्रीहरू प्रयोग गर्ने सीपहरू | |

अन्य उपयोगी विषयवस्तुहरु (किटेर लेख्नुहोस्, जतिवटा लेख्नुभए पनि हुन्छ)

९. यस तालीममा तपाईलाई कुन कुराले सबभन्दा बढी प्रभाव पार्‍यो?

१०. किन?

११. तपाई उही समयमा दुईभन्दा बढी कक्षाहरुको व्यवस्थापन कसरी गर्नु हुन्छ होला ?

१२. यस तालीममा सुधारका लागि कुनै टिप्पणी गर्न वा सुझाव दिन चाहनुहुन्छ भने, कृपया यहाँदेखि तल लेख्नुहोस् ।

तपाईलाई धेरै-धेरै धन्यवाद । म तपाईको सहयोगको सराहना गर्दछु ।

५

Appendix 6

Activities observed during Master Training for Trainers (MTOT) in Chitwan district 24-25 January 2001

| day | Pages | topics | Actions |
|---|---|---|---|
| 1st | 42 | introduction (warm up) | juggling |
| | 42 | what is needed | class discussion |
| | 10 | why multigrade teaching? (reasons) | class discussion |
| | 8 | what is multigrade teaching? | class discussion |
| | 9 | how is multigrade teaching done? (situation) | write the experience on a card |
| | 19 | timetable | homework = making a time table |
| 2nd | 19 | timetable | presentation |
| | 103 | demonstration teaching by the trainer | demonstration for 21 minutes |
| | 28 | how to manage more than two classes | class discussion |
| | 112 | practice teaching by trainee 1 | practice teaching for 15 minutes |
| | 112 | practice teaching by trainee 2 | practice teaching for 16 minutes |
| | 112 | practice teaching by trainee 3 | practice teaching for 18 minutes |

The MTOT sessions held in Chitwan district were observed for 1.5 days. It took ten days to cover all of the seven modules, Grade Teaching, Multigrade Teaching, Primary School Headmaster Training, Teaching Methods, Educational Material, Learning Process and Evaluation, as well as Curriculum Dissemination. For the Multigrade Teaching module, 1.5 days were spent. Three school supervisors or resource persons from each of the six districts participated as the trainees. The number of trainees was eighteen. All trainees were male. The trainees were divided into four groups. The MTOT was conducted in a large meeting room. Each group was seated at a table to work collectively. The MTOT started in the afternoon of the first day, and ran through to the end of the second day. Although the training materials were distributed for some minutes so as to be introduced at the beginning of MTOT, they were not used during the training. The master trainer followed his own training plan to organise MTOT.

Day1

The training started with an introduction 'warm up,' which was covered in the third section of the material. Juggling was used as a metaphor to explain multigrade teaching. The trainer and all the trainees tried to juggle three stones for a while. The most talented trainee explained what was needed to keep juggling the three stones simultaneously. He said what was necessary for juggling was skill, concentration, coordination of three stones, balance,

exercise, right timing and the feeling of willingness. The trainer said that these points for success in juggling were the requirements for multigrade teaching.

Then the trainees were told to discuss the reasons why the teachers should conduct multigrade teaching. A number of reasons were highlighted by the trainees. They were the shortage of teachers, their absence, the lack of classrooms for subjects such as physical education or arts, and the low number of students. Among these, the trainer said that the most significant reason was the shortage of teachers, and that multigrade teaching was compulsory in Nepal.

The next topic was the current situation of multigrade teaching. A small card was distributed to each trainee, and everyone wrote on the card how the teachers in his own Resource Centre (RC) manage multigrade classes. All the cards were sorted into four groups. The groups mentioned the use of teaching aids, giving class work, the appointment of a monitor and providing Self-Leaning Activity (SLA).

Next, a good deal of time was spent on making a timetable. This was an important part of the MTOT sessions. The trainer put a sheet of paper on the blackboard. An example of a timetable, as given on page 13 of the training material, was written on the paper. The curriculum table showing the weekly time allocation of each subject was distributed. The trainer wrote on the blackboard the numbers of grades, teachers and students in four schools, for which the trainees were to make timetables. The trainer directed each group to make a timetable at home.

Day2

During the first hour in the morning, a representative of each group made a presentation on their timetable. After all the presentations, the trainer wrote 1) credit hours, 2) teaching time for the classes, 3) T, AM, AMT on the blackboard. He concluded that most significant point when making timetables was that when ten hours per week of Nepalese were allocated, six hours should be T classes and four hours should be AM classes.

The last part of the morning was demonstration teaching by the trainer. He followed the model for multigrade teaching given in his training plan. He did not make a written lesson

plan, but according to the interview after the demonstration class, prepared mentally for 15 minutes, made SLA materials for 45 minutes and planned in his mind how to teach for 60 minutes.

The lesson for this demonstration class was for Grades 2 and 3 in the same classroom. The taught subject was mathematics for both grades. The lesson took 21 minutes. The trainer-teacher spent the first three minutes with Grade 3. First, he divided the student-trainees into two groups and gave two sheets of paper to each group. Some exercises, like 346-163= ?, were written on the paper (SLA). He selected a monitor and gave him answer keys (AMT). He spent next fifteen minutes with Grade 2, teaching them directly (T). The amount of SLA allowed for Grade 3 was not enough to cover the fifteen minutes when the trainer-teacher was teaching Grade 2. The trainee-students in Grade 3 terminated their SLA in five minutes and started to idle, but he concentrated on teaching Grade 2 without any attention to Grade 3. When the trainer-teacher finished his planned teaching Grade 2, he went back to Grade 3 for a minute, to tell the monitor to write the right answers on the blackboard. The monitor started to copy the right answers on the blackboard. The trainer-teacher left Grade 3 and went back to Grade 2. The last two minutes of his time was spent with Grade 2 to give some homework from the textbook.

In the afternoon, the trainer wanted to select trainees to conduct practice teaching. The given duration of practice teaching was twenty minutes. The trainees were able to choose any subjects and any grades. Three trainees demonstrated. Two were from Nuwakot district, and one was from Lanjung district. All of them took less time than twenty minutes.

The first trainee-teacher's lesson took 15 minutes. He would be the future trainer of Resource Centre Training in Nuwakot district. The subjects were mathematics for Grade 2 and Nepalese for Grade 3. He spent the first minute with Grade 2. He divided the trainee-students into groups, and gave four cards, on which some exercises such as 323-264= ? to groups (SLA). He selected a monitor and gave him answer keys (AMT). Then he went to Grade 3 to teach Nepalese for 9 minutes (T). He went back to Grade 2 for the last two minutes to check the students' work. He duplicated exactly the trainer's demonstration class. The amount of SLA he provided was also insufficient to cover the time when he was teaching the T class.

The second trainee-teacher organized the two classes in the same way. He spent the first two minutes with Grade 1. He appointed a monitor and provided SLA on Nepalese, this involved composing sentences using the words given (AMT). Then he went to Grade 3 to teach about the environment for the rest of the fourteen minutes (T). He went back to Grade 1 to check the task at the end of the lesson. He provided SLA and appointed the monitor, but he did not give any directions or duties to the monitor.

The third trainee-teacher went to Grade 2 first, to tell the students to clean the room. Then he immediately went to Grade 3, explained using the blackboard, and assigned SLA/group work, which consisted of word pairs of antonyms which the trainee-students had to use in sentences with the words. He spent 6 minutes with Grade 3, to supervise them. During that time, the student-trainees in Grade 2 were idling and waiting for the teacher.

After giving SLA to Grade 3, he went back to Grade 2 for 7 minutes. He recited a Nepalese poem to the trainee-students. He appointed a monitor, and assigned the students to write down any hard words in the textbook and ask the teacher their meaning to later (SLA). Then he checked both classes before the end of the lesson. As he spent an equal amount of time with both grades, and assigned SLA for both, which class was T or AMT was not certain. Although he included group work and a monitor, their function was not clear.

None of the three trainees made a written lesson plan for the practice teaching. Even though the last demonstrator acted in a different way from the trainer's model lesson, no particular feedback on the lessons using multigrade class organisation was provided. All the feedback given by the trainer and other trainees was about how to teach and the teacher's behaviour within one grade.

The MTOT seemed to aim to teach the content of the training rather than how to conduct it. The trainees did not learn how to conduct training. Also, it is not evident that the trainees acquired the knowledge of the ideal model of multigrade teaching which the trainer intended to transfer. For example, the first demonstrator, the future RCT trainer in Nuwakot district, duplicated the model lesson of the trainer. By contrast, the third demonstrator conducted multigrade teaching in a completely different way from the model lesson of the trainer, but no feedback was given to him. The result of the training depends on individuals.

Appendix 7

Activities observed during District Training of Trainers (DTOT) in Kavre district

9-12 May 2001

| day | pages | topics | Actions |
|---|---|---|---|
| 1st | 42 | introduction (warm up) | Juggling |
| | 8 | what is multigrade teaching? | class discussion |
| | 10 | why multigrade teaching? (reasons) | class discussion |
| | 9 | how is multigrade teaching? (situation) | class discussion |
| | 49 | what are the skills for multigrade teaching? | group work |
| | 19 | timetable | homework = making a time table |
| 2nd | 19 | timetable | making a time table/ presentation |
| | 21 | what resources are needed for making a time table? | class discussion |
| | 96 | what resources are needed by multigrade teachers? | class discussion |
| | | distribution of the material | |
| | 72 | resource of teaching | reading the material/ class discussion |
| | 73 | Activity 2 (how to use the blackboard) | class discussion |
| | 81 | Activity 7 (topics and suitable activities) | class discussion |
| | 91 | Activity 13 (reference materials) | class discussion |
| | 83 | SLA | class discussion |
| | 100 | examples of SLA | class discussion |
| 3rd | | distribution of training guide | |
| | 103 | demonstration teaching by trainer | demonstration for 27 minutes |
| | 112 | practice teaching by trainee 1 | practice teaching for 26 minutes |
| | 112 | practice teaching by trainee 2 | practice teaching for 13 minutes |
| | 112 | practice teaching by trainee 3 | practice teaching for 15 minutes |
| 4th | 112 | practice teaching by trainee 4 | practice teaching for 19 minutes |
| | 112 | practice teaching by trainee 5 | practice teaching for 29 minutes |

The DTOT sessions held in Kavre district were observed for four days. It took twelve days to cover the four modules, Grade Teaching, Multigrade Teaching, Teaching Methods and Educational Materials, which would be held in the district that year. For the Multigrade Teaching module, four days were spent. All of the 33 resource persons of the district were called to participate as trainees. They were divided into five groups. The DTOT was conducted in a large lecture room in a college campus in Banepa. The groups were seated at large tables.

Day1

On the first day of DTOT, the trainees introduced each other. For self-introduction, the trainer provided a small piece of paper to each trainee, who was told to write his/her name,

address, qualifications, status and the name of his/her school on the paper. Then he mixed the written papers and redistributed. Then each trainee introduced the one whose information was on the paper given to him/her. Then the time schedule and rules for the training were confirmed.

The training started with the introductory part (warm-up) of the material for the third section as the trainer in MTOT had started (Appendix 6). The trainer and some trainees tried to juggle three stones, and then the trainer asked what was needed to keep juggling three stones simultaneously. According to the class discussion, what was necessary for juggling was balance between two hands, mental concentration, the coordination of the three stones, practice and continuity.

Then the trainees discussed the definition of multigrade teaching, and the reasons why the teachers should conduct multigrade teaching. In the class discussion, multigrade teaching meant that a teacher teaches two or more grades at the same time, either in the same classroom or in separate classrooms, during the same lesson period. A number of reasons for multigrading were pointed out by the trainees. They were the shortage of teachers, the absence of teachers for a long term, the lack of school facilities and the small number of students.

The next topic was the current situation of how the teachers managed multigrade classes. The trainees said that the teacher taught in one grade, while the other class was taken care of by the monitor, or was given Self-Leaning Activity (SLA). Half the time of the lesson was spent with one grade and the other half was in the other grade, or the teacher spent 5 to 10 minutes with each group in turn. The two grades were often seated in the same classroom. In some schools, the teacher gave SLA to all the students and sat down waiting for the students complete their task; then the students showed their notebooks to the teacher when they had finished the work. The trainees concluded that although there were many ways of multigrade teaching, it was very common in Kavre district that the teacher went to one grade to teach and ignored another grade during one lesson period, and taught the ignored class during the next period.

Then the skills required for multigrade teachers were discussed. Requirements suggested by the trainees were planning of multigrade teaching, knowledge of the subjects, understanding ability of the student ability level and family background, notions of child psychology, teaching skills relevant to each grade, understanding of the student interests, knowledge of the teaching materials, and the concept of SLA, ideas with the division of time, skills in class control such as selecting the monitor, knowledge of evaluation, class management skill, patience, leadership, attention to equal opportunity, coordination of the classes, and a dynamic attitude.

At the end of the discussion, the trainees started to argue about multigrade teaching. One trainee said that multigrade teaching was better than nothing. Another said that multigrade teaching was the worst among the three types of teaching. Another said that multigrade teaching was better than when the teacher did not teach the additional grade at all.

The trainer shifted the topic to the timetable. He wrote on the blackboard the numbers of grades, teachers and students in five schools, for which the trainees were to make timetables. The trainer confirmed the number of weekly hours for each subject from the curriculum table, and directed each group to make a timetable at home. He said that when ten hours per week of Nepalese were allocated, five hours should be T classes and five should be AM classes. No further explanation or instruction on how to make the timetable was provided.

Day2

The second day started with making a timetable. This had been homework, but most of the trainees did not do it, so the whole morning of the second day was spent on making the timetable. No instruction and explanation about how to make the timetable were given beforehand. Instead, the factors to be considered when making it were discussed. First, the activities of the teacher and the monitor should be balanced. Second, there should not be more than two teachers for the same subject. Third, all subjects should be taught according to the curriculum. Fourth, the teacher loads should be equal.

The factors which should be considered by the multigrade teacher were the numbers of classes and students, curriculum weight, coverage of all subjects, instructions, coordination

between the teacher and the monitor, planning, SLA, planned student activities, resource management, and preparation for evaluation.

Then the training materials were distributed to the trainees. The trainer asked the trainees to find the page 72 and read together from page 72 to page 100, doing some activities given in the material. The topic was the use of teaching resources such as the blackboard, textbooks, reference materials and SLA. This area was not covered by MTOT.

Day3

The handbooks for the trainer were distributed to the trainees. The trainer instructed the trainees to plan for practice teaching. The trainer and trainees prepared SLA materials for demonstration and practice teaching for one hour.

The trainer started with a demonstration of model teaching. The lesson was for Grades 2 and 3 in the same classroom. It took 27 minutes. He spent the first three minutes with Grade 3, to give exercises for mathematics (SLA) and selected a monitor who was given with a key to answers (AMT). Then he spent 22 minutes with Grade 2, to teach social studies (T). Then he went back to Grade 3 for the last two minutes, to check the answers. He did not make a written lesson plan, but he had prepared SLA materials for about 60 minutes before the demonstration class.

The feedback to the trainer was given by the trainees who made three comments. One of their comments was that the trainer gave the task without any explication. The task should have been given with instructions and examples. Another comment was that trainer's writing on the blackboard was not suitable for Grade 2. His skill in drawing was not appropriate. Also attention to cultural differences was missing. He taught about eating meat, but he did not take account of the vegetarian students.

Then five trainees demonstrated their practice teaching. The first trainee-teacher's lesson lasted 26 minutes. The subject was Nepalese, for both Grades 2 and 1. His organisation of the class was same as the trainer's. He spent the first three minutes with Grade 2, giving then instructions for singing a song (SLA, AMT). Then he went to Grade 1 to teach Nepalese for

22 minutes (T). During the twenty-two minutes, he checked Grade 2, and again at the last minute.

There were three comments in the feedback from the class. First, it was not a good idea to tell the students that he would attend to another grade when he left one grade. Second, when one student asked a question, he should have answered the student, instead of saying that he would answer tomorrow. Third, he used only figures, not letters when he taught Grade 1. It was too difficult for Grade 1 to be taught with figures only.

The second trainee-teacher spent the first three minutes with Grade 2, to give a template for a drawing task, drawing a picture of an elephant and a house (SLA). He selected a monitor (AMT). Then he worked with Grade 3, teaching Nepalese for ten minutes (T). He went back to Grade 2 to check their task at the end of the lesson. The feedback for him was that he wrote too fast on the blackboard, the template given was too big to copy in the notebooks, and that he should not write on the board with his left hand

The third trainee-teacher spent the first three minutes with Grade 2, showing a picture of a house as SLA on social studies, without any instruction or explication, he merely told the students to look at it. Then he spent ten minutes teaching Nepalese to Grade 1. He read out a poem and the students repeated it after him. Then he told the students to do some exercises from the textbook, and went to Grade 2. He asked the students of Grade 2 how they were, and if they had any questions, and stayed with them for five minutes. Then he went back to Grade 1 again, to check their notebooks. After the practice teaching, the trainees who role-played as Grade 2 students claimed that they could not do anything with the picture of the house, so that more clear tasks or questions were needed.

Day 4

The fourth trainee-teacher was the future RCT trainer in Sunthan RC. He managed the classes in the same way as the previous trainee. He set some mathematics tasks (SLA) for Grade 2 and selected a monitor (AMT). Then he taught mathematics with Grade 3 for twelve minutes (T). Then he checked the notebooks of the students in Grade 2, after giving the task cards to the students in Grade 3. After two minutes, he went back to Grade 2 and explained again, using the cards for another three minutes. The feedback for him was that he should

have started with a review of the previous lesson, he should have corrected the homework before the lesson, and the small numbers should have come before the bigger numbers when he taught mathematics.

The last trainee-teacher also taught mathematics to Grades 2 and 3. He took twenty-nine minutes for the lesson. He divided his time equally between the two grades. He went to Grade 2 for four minutes, to give them cards with mathematics problems (SLA), and then he immediately went to Grade 3, to teach them for 8 minutes. He asked the students to read the names of the months one by one. While they were working on this task, he went to Grade 2 to teach them for 6 minutes. After telling Grade 2 students to copy the names of the weeks in their notebooks, he went to Grade 3 again, to teach for another 9 minutes. At the end of the lesson, he set homework and returned Grade 2 to conclude the lesson.

In the trainer's model lesson and the five trainee-teachers' practice teaching, there were mainly two types of class management. One was that a teacher taught one grade mainly as a direct teaching class and gave SLA to the other grade who were under the control of the monitor (T, AMT). The other was that a teacher divided his time in two, and taught two grades in turn. Although the training material recommends the former type, the trainer did not correct the latter. All feedback was about how to teach one grade, and the teacher's behaviour with one grade.

Appendix 8

Field note on Resource Centre Training (RCT) in Nuwakot district
22June-1July 2001

The RCT in Trisli RC of Nuwakot district was observed for ten days. There was one group of trainees for Headmaster Training and three groups for Multigrade Teaching Training. All of the 75 public primary school teachers of the RC area were called to the training. Three trainers held three training groups of 25 trainees. One of the three training groups was observed. The trainer of this group was a trainee in MTOT who had been observed in January. The trainer divided his 25 trainees into four groups. Since there is only one meeting room with tables and chairs for group discussion in the RC building, the RC building was not used for the training. Multigrade Teaching Training was conducted in three small classrooms in a secondary school. There were long heavy benches attached to tables in rows.

Day 1

The trainees were seated in rows. The trainer distributed the training materials, notebooks and pens to the trainees. He divided the class into five groups. In order to introduce multigrade teaching, the trainer gave three questions to answer, on the definition, the causes and methods of multigrade teaching (This activity had been introduced by MTOT, Appendix 6). He provided large sheets of blank paper, for presenting their ideas and opinions, to each group. After some time, a representative of each group read out their paper. Each representative lasted one or two minutes, then the trainer gave a short lecture, introducing multigrade teaching, for six minutes.

He started the training with the first page of the first section. The trainer opened the first page of the training material and read it aloud. After reading, he told the trainees to work on Activity 1 (exercise). During the next 28 minutes, the trainees worked on the assigned task. The trainer waited in front of the class for the task would be done checking his training material. Sometimes he walked around the classroom to monitor the trainees. Then one of the trainees presented his answer, and the trainer commented.

After 55 minutes for a lunch break, the trainer allocated exercise activities to each group in order. He told Group A to work on Activity 1, Group B on Activity 2, Group C on Activity 3, Group D on Activity 4 and Group E on Activity 5. He allowed about 20 minutes for work on

the assigned activities by individual groups. He allocated activities using the material to the groups, but as the trainees were seated in rows, they hardly achieved group work. After 20 minutes, each group presented the answers for the allocated activity in order. Each group spent around five minutes as its presentation. The trainees of other groups wrote down the answers. The trainer read out the conclusion of the unit written in his training material, and all the trainees copied this on their own training materials. This was the end of the first day. The training ended at 15:54. The trainer did not finish the section for the first day in the training material.

Day 2

The trainer and some trainees came to the school as early as 10:30, but the training in fact started at 11:00. The classroom was rearranged; and the trainer arranged the tables for four groups. However, some trainees did not sit down collectively. The trainer told the trainees to work on Activity 6 for eight minutes. After confirming the answer with the whole class, the trainer and three trainees read aloud pages eight and nine. The trainer read out his comments to conclude this section, and all the trainees copied these on their own training materials.

Then the trainer gave a quiz for 'warming up' to get the trainees' attention. After the eight minutes of the quiz, the trainer read the second section of the training material. The topic was the timetable. The trainer read the text about the timetable, and told the trainees to work on Activities 2 and 3. While the trainees were working on the tasks, the trainer copied a table of the curriculum weighting on the blackboard. He assigned an exercise, making a timetable, as homework for the four groups, without any explanation about timetables in relation to multigrade teaching. The situation of one teacher with two grades was given to Group A, two teachers with three grades for Group B, three teachers with five grades for Group C and two teachers with four grades for Group D, without any specific direction on how to make timetables or what the trainees should consider.

As the task of making timetables was homework, the trainer proceeded with the training material. Group A was told to do Activity 5, Group B was given Activity 6, Groups C and D Activity 7. In fact the part of Activity 7 given to Group D was not an exercise. After 39 minutes, each group presented its answers. Then, the trainer told the trainees to work on Activities 6 and 7 for eight minutes. The answers were presented by trainees; the trainer

concluded, and other trainees copied his conclusion on their own materials. The same cycle of activities continued until Activity 11 (When there was any text in the training material, the trainer or someone else read it out, and when there was an exercise activity, the trainees were told to work on it. Later, the answers were shared in the class and confirmed by the trainer.)

After the lunch break, the trainer assigned another activity to each group. Group A was told to do Activity 12, Group B was given Activity 13, Group C Activity 14 and Group D Activity 15, for fifteen minutes. Then each group presented their answers. Then the trainer concluded. At 15:40, the trainees asked to finish the training, because the local bus would leave. The trainer provided large sheets of blank paper for homework (making timetables).

Day 3

The classroom was again changed. Now the long tables and benches were facing the blackboard. The trainees started to appear around 11:00. One trainee was silently making a timetable in the classroom. At 11:10, two other trainees also started making timetables. Nobody had done the homework at home. All groups started making the timetables; and continued until 12:20; by that time, all groups had completed their timetables. Each group presented its timetable at the front of the classroom, and the trainer commented on each piece of work. Partly because the trainees had not received any explanation about making the timetable in relation to multigrade teaching, they did not learn to do so. Although they could produce same sort of timetable, it did not include any features which would support multigrade teaching.

At 12:43, the trainer assigned different activities for the four groups. Group A was told to do Activity 16, Group B Activity 17, Group C Activity 18 and Group D Activities 19 and 20 for nineteen minutes. Then each group presented its answers and the trainer commented.

At 14:40, the trainer introduced the third section of the training. He introduced the beginning of this section just as the master trainer had demonstrated in MTOT (Appendix 6). He used stones to explain that multigrade teaching was just like juggling three stones. However, his action did not succeed in getting the attention of the trainees.

By 15:30, the trainees were not concentrating on the training. Some worried about the time of their local bus. Others chatted with their colleagues. Others were silently waiting until the time came. The trainer was talking to one trainee. It looked as if he was giving this trainee a private lecture. Finally, the third day of the training finished at 15:54.

Day 4

This day's work started at 11:12. The trainer waited to start until the number of the trainees became at least 16. The activities were allocated to different groups, as on the previous day. At 11:59, one trainee presented his answer for Activity 7. As Activity 7 was not a question, the trainee read out the text for Activity 7 and pointed out a mistaken statement in the training material as his comment. The mistake was discussed for 36 minutes, until the next break.

The session after the break started with an ice-breaking activity. The trainer and two trainees organised a quiz. Then the trainer allocated the activities to the four groups. When one round finished at 15:28, the trainer immediately allocated the second round of task allocation. Otherwise, the trainees would have tried to terminate the training. Even though the trainees were still working on their allocated activities, some trainees insisted on ending the session. Therefore, the trainer made the last task homework, and terminated the training at 15:45.

Day 5

This started at 11:15, with 14 trainees. A volunteer from each group presented his answer, in turn. At 11:41, the trainer allocated four more activities to the four groups. After the four groups had presented their answers, two trainees went to the front and introduced a quiz. After the quiz was completed, it was time for a break. This kind of activities was called an 'ice-break,' but it took place not at the beginning but at the end of the session. Such an activity in fact does not have the function of 'breaking ice.'

In the middle of the afternoon sessions, another 'ice break' took place. The trainer put 'ice-breaking time' there because the section for the fifth day was over, and he wanted to have an ice breaking activity before starting the new section, according to the trainer in an interview with later that day.

Day 6

The trainer gave the trainees a small piece of paper, to shuffle the trainees and change the groups. The participants at that time were 14 trainees. The trainer read the training material, and assigned a task to make SLA at 11:12. Each trainee should create ten questions suitable for SLA, on any subjects. By 12:10, most trainees had submitted the ten written questions, and the trainer started to check them. As the trainees had become noisy by 12:15, the trainer gave them 'ice breaking quiz' for the time being.

At 12:36, the trainer finished checking the submitted questions, and asked each group to state what kind of questions were suitable for SLA. Group A said 'matching question and answer,' Group B 'filling the blanks,' Group C 'short questions' and Group D 'true and false.' The discussion was related to pedagogically technical points, and the answers were concerned any questions used in teaching and learning. They were not particular relevant to be SLA.

At 12:42, the trainer posed the question, 'What are the skills required for multigrade teaching?' At 12:44, the class had a short break. After 18 minutes of the break, each group wrote their answers on large blank piece of paper, to present in the class. The answers of Group A were the skills of drawing, presentation, acting, games, clear writing, class management, demonstration and language. Those of Group B were the skills of drawing, writing, acting, singing, dancing, playing musical instruments, presentation, making annual, monthly, weekly and daily plans, making materials, selecting the monitor and working hard. Those of Group C were the skills of student management, leadership, games, music and singing, acting, drawing, knowledge of subject matter, class direction and selecting the monitor. Those of Group D were the sills for drawing, playing games, singing, painting, storytelling, making exercises, knowledge of subject matter and selecting the monitor. All the skills which they mentioned were related to teaching in general. The trainees were more concerned about basic skills for general teaching than in the skills for multigrade teaching.

After the lunch break, the trainer opened the pages at the seventh section in the training material. The content of the fifth section concerned to prepare SLA, and the sixth section was on how to use it. The training targets were different, but the trainer ran through the sixth section and started the seventh section, because the sixth section did not consist of exercise activities.

The trainer introduced the content of the seventh section for 22 minutes. Some trainees suggested having one day's holiday, because they started the seventh section on the sixth day. The trainer rejected the suggestion immediately, but a short discussion took place for a few minutes.

The trainer demonstrated his model lesson for multigrade teaching. He had not prepared a written lesson plan. His model lesson took only 10 minutes. The topic of the simulation was mathematics for Grades 1 and 2. He spent three minutes on Grade 1, to give SLA. He wrote three addition problems on the blackboard, appointed a monitor, and gave him the answer keys (AMT). Then he went to Grade 2 and wrote three multiplication problems on the blackboard. He monitored the students' work (T). Two minutes later, he appointed one student to answer the first question on the blackboard. The other two questions were answered by two other students. Then he went back to Grade 1, to check that they were satisfied briefly, for the last two minutes.

After the demonstration class, three trainees commented on the demonstration class. Their commentary was related to technical issues which are common in with monograde teaching. It was only 15:00, and the trainer wanted to the trainees to continue practice teaching, but they said that they were not mentally ready yet, and that they wanted to terminate the training for that day. Then the trainer tried to decide on which of the following three days the trainees would conduct practice teaching, but this was not easy. Some trainees declared that they could not attend the training on the following days. The trainer had to insist on the attendance of the trainees. This discussion took 20 minutes. At last, the trainer decided to abandon the schedule for practice teaching; he said that whenever one of the trainees felt ready to do practice teaching, they should do it within the following three days.

Days 7, 8 and 9

For the following three days, 21 trainees conducted practice teaching. Six trainees did so on the seventh day, seven on the eighth day and eight on the ninth day. Each trainee selected the conditions such as grades, subject topics and the length of practice teaching. After each practice teaching, the trainer and some trainees commented. The trainer concentrated on ensuring that all the trainees conducted practice teaching, rather than on the quality of it.

Day 10

The training was held from 7:30 in the morning, as the trainees had requested. The trainer introduced the eighth and ninth sections, and explained about the observation form on pages 98 to 101 for two minutes. He said that the observation form should be used to assess practice teaching, but he did not use it, because copies of the form to distribute were not available. Then he started the tenth section, to conclude the training. He read the training manual, and sometimes asked the trainees questions. The trainees answered when they were asked. The trainer asked the trainees to think about one of the questions, 'What does the implementation for multigrade teaching require?' on page 103. One trainee read his answer. Then the trainer concluded that the implementation of multigrade teaching required classroom management, the use of SLA, and making annual, monthly and daily lesson plans.

After the trainees completed my evaluation forms, breakfast was served at 8:00. Then a closing ceremony was solemnly held, for 21 minutes. First, one trainee sang a song. Then the representative of the trainees made a speech. Two trainees presented jokes, and the same trainee sang again. I was asked to make a speech as a guest. Finally, the trainer made a speech urging the necessity of training, and declared that the training was closing. All the trainees applauded. Then the training allowance was distributed.

Appendix 9

Field note on Resource Centre Training (RCT) in Kavre district
7-15 July 2001

The RCT in Sunthan RC of Kavre district was observed for six days. All the 44 public primary teachers of the RC area were called for the training, but only 33 out of the 44 teachers registered. The trainer was a trainee in DTOT observed in May. The training was conducted in a small classroom in a secondary school. There were long heavy benches attached to tables in rows.

Day 1

The trainer in Kavre district distributed the training materials, pens, pencils and notebooks to the trainees on the first day of the training. For self-introduction, the trainer adopted the method used in DTOT. He distributed a small piece of paper to each trainee, and told them to write their names, addresses, qualifications, status and the name of their school on the paper. Then he mixed the written papers and redistributed them. Each participant introduced the person whose information was on the paper given to him. Then the time schedule and rules for the training were confirmed.

At 11:32, the training session started. The trainer suddenly told the trainees to work on the question in Activity 1, on page one of the material, without any introduction or explanation. As the trainer did not explain anything before starting the activity, many trainees had difficulty in understanding the directions, and asked questions about the task individually. Some trainees consulted with their neighbour colleagues in the same row. After 11 minutes, the trainer started explaining about the four types of teaching, including multigrade teaching. Then the answers for Activity 1 were confirmed with the whole class.

After Activity 1 had been completed, the trainer divided the trainees into five groups. He asked how the trainees' schools conducted multigrade teaching. Then he told the trainees to work on Activity 2 on page three. Although he had divided the trainees into groups, the trainees worked on the exercise activity individually. Some trainees continued to consult with their colleagues in the same row. As they were not seated in groups, group work was not really done.

After confirming the answers for Activity 2, the trainer assigned the next task and went out of the classroom. The trainees started wandering around the classroom and some even walked out. After 20 minutes, the trainer came back to the classroom and checked the answers. Then he assigned the trainees to work on Activity 3 for five minutes. One trainee presented his answer. Then it was time for the lunch break.

After 54 minutes of lunch break, the trainer told one trainee to read aloud Activities 4 and 5 on page five of the training material. Another trainee read page six. The trainer read and explained about the topics on pages eight and nine. Activity 10 on page nine was discussed with the whole class. He told the trainees to work on the exercise activities and read the text of another part of the material. Then the trainer assigned Activity 11 to the trainees. That was the last activity for the first section for the first day. As the duty for the first day was over, the trainer terminated the training at 15:10.

Day 2

The trainer started with an 'ice breaker' for eight minutes. Then the trainer told one trainee to read page eleven aloud. The topic was the timetable. The trainer read the explanation about the timetable from the material, and asked the trainees to discuss the table of the curriculum weights in Activity 3. Although the trainer explained about the timetable, he did not assign the task of making timetables.

He continued with the training material, and explained the necessity of the monitor for multigrade teaching. One trainee objected to the use of monitors. He said that the monitor could not control other students, and other students beat or ignored the monitor. Then the discussion about monitors started. One trainee asked whether the students in higher grades could monitor lower grades. The trainer answered that it was not possible, because the students in higher grades should follow their own lesson. The discussion continued, but the trainer let them discuss, and then introduced the further pages of the training material. The trainer read out the training materials. When there was an activity to work on, individual trainees worked on the activity. The trainee who finished first read out his/her answer, and others who had not finished copied this answer on their own training materials.

By the time of the lunch break, it was very hot. During the lunch break, some trainees asked to finish the training a couple of days earlier. The trainer refused the proposal, but changed the time of the training from 6:00 to 9:30, to avoid the heat on the following day.

After the lunch break, the trainer hurried to finish the second section. He ran through the training material very quickly, reading out the text of the training material and the directions for exercises. The trainees worked on the exercise activities individually. The trainee who finished the first presented his/her answer, and others again copied it on their own materials. Then the trainer read the text for the next round. When the trainer was tired or reading, he asked a trainee to read. At 15:58, the trainer finally managed to finish the second section of the training material. Therefore, he happily terminated the training.

Day 3

The cycle of training was the same as the previous day, for a whole day. The trainer, or one of the trainees, read the text and the instructions given in the material. Then each trainee tried to solve the problems given in the activities, or to answer the questions in the material. When someone finished, he/she presented his/her answers. Other trainees copied them on their own materials. Sometime a class discussion was held. Finally, the trainer concluded and summarised the section.

Although the trainer divided the class into groups, most of the trainees worked individually. The exercise activities were individually done. The answers were corrected together, and the 'right' answers were shared with the whole class.

Day 4

Observation was not possible.

Day 5

Observation was not possible.

Day 6

The training session was cancelled due to the Nepal Bandha (general strike).

Day 7

The trainees prepared teaching materials, such as templates for practice teaching, for more than one hour. While the trainees worked individually, some of them stood in front of the blackboard one by one and entertained by singing a song or presenting jokes. Between 7:46 and 8:06, two trainees demonstrated practice teaching. No feedback or comments were given.

The practice teaching of the two trainees was not for multigrade teaching. They demonstrated teaching with prepared teaching material in a monograde setting. Because the topic for the sixth day is the use of SLA, and the content for SLA in the training material does not focus on self-learning but on the contents of teaching materials, the point on which the training focused was how to make and use general teaching materials. The training material suggested making and using teaching materials such as templates, calendars, matchstick figures and songs and games. The training topic intends the use of SLA, but the training material does not mention anything about the appropriate amount and contents of materials suitable for self-learning. It focuses on pedagogical points which should be remembered when making any teaching materials, including SLA. Thus the attention of the trainees was paid only to making beautiful teaching materials and presenting them in their simulated monograde class.

After the practice teaching, the trainer continued to cover the training material for that day. He did not terminate the training at 9:00 because he had not finished the sixth section yet. When that section was over, he terminated the training at 9:10.

Day 8

The training started with 'ice breaking' for eight minutes. At 6:43 the trainer read the observation form for the eighth and ninth sections of the training material. He provided A4 size sheets of blank paper and coloured pens to the five groups, and told each group to make a timetable. However, he did not explain how to make it, and the directions were not clear, so that the trainees had difficulty in making the timetable. The trainer sometimes monitored the work of the trainees, but mostly he read the training material on his desk. At 7:20, the trainer put five timetables on the blackboard. Each group presented its timetable. The trainer commented. His comments were in fact repeated instructions for the assigned task, because most of the trainees had not really understood the directions, and failed to make timetables.

At 8:12 'ice breaking' time was taken again for 28 minutes, and the training ended at 8:40. Here 'ice breaking' was not really for breaking ice but for adjusting the ending time.

Day 9

After 18 minutes of 'ice breaking' the trainer began the tenth and review sections. He told the trainees to work on the concluding questions on page 102. The experiences gained in the training, and the problems of each school, were shared. At 7:10, the trainer told the trainees to make their own school's timetable, working with trainees from the same school. The trainees sat with other trainees from the same school. The trainer provided an A4 sheet of paper for each school. At 8:20, the trainees who had completed the timetables started to put them on the blackboard. The trainees were from 12 schools. Out of the 12, five schools are monograde schools. For them, the timetable does not have any relation with multigrade teaching. There are seven multigrade schools, but the training did not emphasise on multigrade class organisation, the attention of the trainees was paid mainly to the order and weight of subjects.

At 9:00 the trainer distributed my evaluation forms. After the completion of the forms, the training allowance was distributed.

Day 10

The training session was cancelled due to a local festival.

Appendix 10

Focus group discussions with Resource Centre Training (RCT) trainers

Nuwakot district
15 February 2002

In Nuwakot district, five RCs held Multigrade Teaching Training in 2000/01. The focus group meeting with six RCT trainers, two in Trisuli RC and four in the other RCs, was held eight months after the RCT. The trainers of Trisli RC are not Resource Persons for Trisuli RC, therefore they did not visit and supervise the schools in Trisuli RC systematically. However, the other four trainers are Resource Persons for their own RCs, so they visited their RC schools from 13 to 16 times during the eight months.

In the meeting, what happened in the classrooms after the training was discussed. The trainers said that the changes which took place after the training included the appointment of monitors, the methods of class organisation and evaluating students, the provision of SLA, and the improvement in student discipline and attitude in the community. The trainers observed and remarked on changes in class organisation in some classrooms, and in the way of appointing monitors and providing SLA. All six trainers noticed improvement in class organisation and the implementation of the monitor system. They considered that approximately 50-60% of their RC schools changed in respect at the two training components. The six trainers considered that approximately 25% of teachers were providing SLA. They also noticed a significant improvement in student discipline.

One of the trainers said that 25-50% of classroom activities were changed in his RC classrooms after the training. Before the training, the teachers were confused about what to do with two or more grades, but after it, they organised the multigrade classes by differentiating AMT and T classes. After the training, the behaviour of the students improved. The students asked the teacher for permission to do something during the lesson now. After the training, the teachers worked harder to make a timetable and follow it. He felt that the teachers were more positive and active after the training.

One of the most significant issues raised by all trainers was the monitor. They said that the monitor system had existed before the training, but monitors were merely appointed. After

the training, the teacher gave instructions to the monitor systematically, for the monitor to look after the class.

Another trainer said that the teachers were less confused, and now worked systematically, with more class activities than before. The teachers assigned more tasks to for the students do. He was very impressed by the significant difference in the community. He and the teacher had explained about multigrade teaching to the community, and let a member of the School Management Committee observe the multigrade class. He said that previously the members of the community had demanded that more teachers should be allocated to the school, but after the observation, the community members also learned about multigrade teaching.

The trainers added, however, that the impact of the training emerged only when Resource Persons visited the school, and that the teachers did not implement regularly what they learned in the training.

Kavre district
14 February 2002

In Kavre district, eight RCs held Multigrade Teaching Training in 2000/01. A focus group meeting with all the Resource Persons of the district, including the eight RCT trainers, was held eight months after RCT training. The RCT trainer for Sunthan RC was not a Resource Person, so he was not included in the meeting. Some RCs, including the Sunthan RC held RCT for all the teachers in RC schools. Other RCs selected only multigrade teachers and send them to RCT held in another RC where Multigrade Teaching Training was operating.

In the meeting, what happened in the classrooms after the training was discussed. Although some positive change was mentioned by a few trainers in the discussion, the main opinions about multigrade teaching were negative. The trainers had strong negative perceptions of such teaching, and from the beginning, they did not expect that the training would improve teaching in multigrade schools. One trainer said that only providing training only was not sufficient. Teaching materials should have been provided at the same time. A few trainers claimed that a sufficient number of teachers should have been provided, because one teacher could not manage many classes at the same time. Another trainer said that sufficient

classrooms should have been provided. Another trainer said that the ten-day training package was too limited to influence the classroom. It was too short for many topics. He added that the classroom was very small, without appropriate furniture and with teaching materials for only a few teachers. It was difficult to adopt what they learned from the training in such conditions. He said that the teachers did not apply any recommended teaching methods. All of the trainers said that lesson plans were not prepared. One trainer said that the teachers did not have time to make lesson plans because of household chores.

Some trainers mentioned something positive. These trainers admitted that something changed after the training. They said that changes after the training included the provision of SLA, the appointment of monitors, and making timetables. One trainer said that before the training the teacher left the students of one grade without any assigned SLA, while the teacher taught another grade. After the training, this teacher provided SLA. Another trainer said that before the training, the lesson time was not fully used, but after the training the teacher divided the lesson period equally and provided SLA (This description indicates that 'the pattern two plus SLA' was observed in his RC as well).

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